San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

NOV 01 2011

Larry Landis
Chevron USA Inc
P O Box 1395
Bakersfield, CA 93302

Re: Notice of Preliminary Decision - Title V Permit Renewal
District Facility # C-311
Project # C-1052463

Dear Mr. Landis:

Enclosed for your review and comment is the District's analysis of the application to renew the Federally Mandated Operating Permit for Chevron USA Inc for its Heavy Oil Facility at the Coalinga Field in Fresno County, California.

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

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

Sincerely,

David Warner
Director of Permit Services

Attachments
C: Tim Bush, Permit Services Engineer

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
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San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

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NOV 01 2011

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

Re: Notice of Preliminary Decision – Title V Permit Renewal
District Facility # C-311
Project # C-1052463

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of the application to renew the Federally Mandated Operating Permit for Chevron USA Inc for its Heavy Oil Facility at the Coalinga Field in Fresno County, California.

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

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

Sincerely,

David Warner
Director of Permit Services

Attachments
C: Tim Bush, Permit Services Engineer

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NOV 01 2011

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

Re: Notice of Preliminary Decision - Title V Permit Renewal
District Facility # C-311
Project # C-1052463

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of the application to renew the Federally Mandated Operating Permit for Chevron USA Inc for its Heavy Oil Facility at the Coalinga Field in Fresno County, California.

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

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

Sincerely,

David Warner
Director of Permit Services

Attachments
C: Tim Bush, Permit Services Engineer

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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Fresno Bee

NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED RENEWAL OF
THE FEDERALLY MANDATED OPERATING PERMIT

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed renewal of the Federally Mandated Operating Permit to Chevron USA Inc for its Heavy Oil Facility at the Coalinga Field in Fresno County, California.

The District's analysis of the legal and factual basis for this proposed action, project #C-1052463, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. There are no emission changes associated with this proposed action. This will be the public's only opportunity to comment on the specific conditions of the proposed renewal of the Federally Mandated Operating permit. If requested by the public, the District will hold a public hearing regarding issuance of this renewed permit. For additional information, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900. Written comments on the proposed renewed permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CALIFORNIA 93726-0244.

SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT

Proposed Title V Permit Renewal Evaluation
Chevron USA Inc
C-311

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TITLE V PERMIT RENEWAL EVALUATION

Heavy Oil Production

Engineer: Tim Bush
Date: October 26, 2011

Facility Number: C-311
Facility Name: Chevron USA, Inc
Mailing Address: P O Box 1392
Bakersfield, CA 93302

Contact Name: Martin Lundy
Phone: (661) 654-7142

Responsible Official: D. L. Puckett
Title: Western California Area Manager

Project # : C-1052463
Deemed Complete: June 27, 2005

I. PROPOSAL

Chevron USA, Inc was issued a Title V permit on September 30, 2001. As required by District Rule 2520, the applicant is requesting a permit renewal. The existing Title V permit shall be reviewed and modified to reflect all applicable District and federal rules updated, removed, or added since the issuance of the initial Title V permit.

The purpose of this evaluation is to provide the legal and factual basis for all updated applicable requirements and to determine if the facility will comply with these updated requirements. It also specifically identifies all additions, deletions, and/or changes made to permit conditions or equipment descriptions.

II. FACILITY LOCATION

Chevron USA, Inc is located at Heavy Oil Production in Fresno County, CA.

III. EQUIPMENT LISTING

A detailed facility printout listing all permitted equipment at the facility is included as Attachment A.

IV. GENERAL PERMIT TEMPLATE USAGE

The applicant is requesting to use the following model general permit Template:

Template SJV-UM-0-3 Facility Wide Umbrella

The applicant has requested to utilize template No. SJV-UM-0-3, Facility Wide Umbrella. Based on the information submitted in 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 Renewed 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 form model general permit templates and are not subject to further EPA or public review.

Conditions 1 through 40 of the requirements for permit unit C-311-0-2.

VI. FEDERALLY ENFORCEABLE REQUIREMENTS

A. Rules Updated

- District Rule 2020, Exemptions
  (amended March 21, 2002 ⇒ amended August 18, 2011) The most

recent amendment to the District rule does not affect the applicability of template UM-03.

- District Rule 2201, New and Modified Stationary Source Review Rule (amended April 21, 2011)

- District Rule 2520, Federally Mandated Operating Permits (adopted June 15, 1995 ⇒ amended June 21, 2001)

- District Rule 4101, Visible Emissions (amended November 15, 2001 ⇒ amended February 17, 2005)

- District Rule 4401, Steam-Enhanced Crude Oil Production Wells (amended January 15, 1998 ⇒ amended June 11, 2011)

- District Rule 4601, Architectural Coatings (amended October 31, 2001 ⇒ amended December 17, 2009)

- District Rule 4621, Gasoline Transfer Into Stationary Storage Containers, Delivery Vessels, and Bulk Plants (amended June 18, 1998 ⇒ amended December 20, 2007)

- District Rule 4622, Transfer of Gasoline Into Vehicle Fuel Tanks (amended September 19, 2002 ⇒ amended December 20, 2007)

- District Rule 4623, Storage of Organic Liquids (amended December 20, 2001 ⇒ amended May 19, 2005)

- District Rule 4701, Internal Combustion Engines – Phase I (amended December 19, 2002 ⇒ amended August 21, 2003)

B. Rules Removed

- District Rule 8020, 8030, and 8060, Fugitive Dust (PM_{10}) Emissions (amended April 25, 1996)

  These rules were removed on November 15, 2001 and were replaced with District Rules 8021, 8031, and 8061.

C. Rules Added

- District Rule 4306, Boilers, Steam Generators and Process Heaters - Phase 3 (adopted October 16, 2008)
- District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (adopted October 16, 2008)
- District Rule 4702, Internal Combustion Engines Phase 2 (adopted August 18, 2011)
- District Rule 8011, General Requirements (adopted August 19, 2004)
- District Rule 8021, Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities (adopted August 19, 2004)
- District Rule 8031, Bulk Materials (adopted August 19, 2004)
- District Rule 8041, Carryout and Trackout (adopted August 19, 2004)
- District Rule 8051, Open Areas (adopted August 19, 2004)
- District Rule 8061, Paved and Unpaved Roads (adopted August 19, 2004)
- District Rule 8071, Unpaved Vehicle/Equipment Traffic Areas (adopted September 16, 2004)
- 40 CFR 60, Subpart IIII, New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines
- 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines

D. Rules Not Updated

- 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 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)
- District Rule 2080, Conditional Approval (amended December 17, 1992)
- District Rule 4201, Particulate Matter Concentration (amended December 17, 1992)
- District Rule 4202, Particulate Matter - Emission Rate (amended December 17, 1992)
- District Rule 4801, Sulfur Compounds (amended December 17, 1992)
- 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines
- 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos
- 40 CFR 64, Compliance Assurance Monitoring (CAM)
- 40 CFR Part 82, Subpart F, Stratospheric Ozone

VII. 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".

For this facility, the following are not federally enforceable and will not be discussed in further detail:

A. Rules Not Updated

District Rule 4102, Nuisance (as amended December 17, 1992)

Condition 1 of permit unit -0-2 is based on District Rule 4102 and will therefore not be discussed any further.

B. Rules Added

17 CCR 93115, California Code of Regulations, Title 17, Division 3, Chapter 1, Subchapter 7.5, Measure 93115 (adopted December 8, 2004)

Conditions 3, 4, 5, 13, 15, 17, 18, and 21 of the requirements for permit unit C-311-235-1 are based on the rule listed above and are not Federally Enforceable through Title V. However, with the exception of condition 15, these conditions also show compliance with several SIP Approved District Rules as discussed below. Therefore, these conditions are listed as Federally Enforceable on the permit requirements.

VIII. PERMIT REQUIREMENTS

The purpose of this evaluation is to review changes to federally enforceable requirements; therefore, this compliance section will only address rules that have been amended or added since the issuance of the initial Title V permit.

Dormant Emission Units:

Permit units C-311-19, -22, -23, -43 -46, -47, -48, -49, -50, and -51 are currently out of operation and are designated as dormant emission units by District Permit conditions. Permit conditions have been added to these permit units requiring that an Authority to Construct permit must be acquired before the facility operates the units. In addition, the facility will be required to submit an application to comply with Title V requirements of District Rule 2520 prior to operating. Therefore these permit units will not be evaluated further in this permitting action.

A. 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.

B. District Rule 2201 - New and Modified Stationary Source Review Rule

District Rule 2201 has been amended since this facility's initial Title V permit was issued. This Title V permit renewal does not constitute a modification per section 3.26, defined as an action including at least one of the following items:

1) Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.
2) Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. Routine replacement shall not be considered to be a structural change.
3) An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.
4) Addition of any new emissions unit which is subject to District permitting requirements.
5) A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

Therefore, the updated requirements of this rule are not applicable at this time.

C-311-21-5: 58.5 MBTU/HR SG 13-5 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE LOW-NOX BURNER

The facility is proposing to include ATC C-311-21-6 to remove fuel oil firing capability, limit CO emissions to 50 ppmvd @ 3% O2 (0.037 LB-CO/MMBTU), and retrofit the steam generator with a north american gle low-nox burner (or district approved equivalent) to achieve 15 ppmvd-NOx @ 3% O2 (0.018 lb-nox/mmbtu) for Rule 4306 compliance. The renewed PTO will be based on this ATC.

Conditions 1 and 2 from the ATC have been removed. These conditions includes District Rule 2520 requirements for modifying their Title V permit. The facility has complied with these requirements.

Conditions 3 through 7 from the ATC have been removed. These conditions includes District Rule 4306 requirements for modifying their Title V permit. The facility has complied with these requirements.

Condition 8 from the ATC has been included as condition 41 of the requirements of the facility wide permit.

Conditions 9 through 19 from the ATC are included as conditions 1 through 11 of the requirements for this permit unit.

Conditions 20, 24, and 28 from the ATC were deleted. These conditions refer to an initial source test period and "shakedown" period that has expired.

Conditions 21 through 27 from the ATC are included as conditions 12 through 17 of the requirements for this permit unit.

Conditions 29 through 42 from the ATC are included as conditions 18 through 31 of the requirements for this permit unit.

Conditions 32 through 34 have been added to the requirements for compliance with District Rule 4320 compliance.

C-311-25-4: 58.5 MMBTU/HR SG 13-9 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE LOW-NOX BURNER AND A FLUE GAS RECIRCULATION (FGR) SYSTEM

The facility is proposing to include ATC C-311-25-5 to remove fuel oil firing capability, limit CO emissions to 50 ppmvd @ 3% O2 (0.037 LB-CO/MMBTU), and retrofit the steam generator with a north american gle low-nox burner (or district approved equivalent) to achieve 15 ppmvd-NOx @ 3% O2 (0.018 lb-nox/mmbtu) for Rule 4306 compliance. The renewed PTO will be based on this ATC.

Conditions 1 and 2 from the ATC have been removed. These conditions includes District Rule 2520 requirements for modifying their Title V permit. The facility has complied with these requirements.

Conditions 3 through 7 from the ATC have been removed. These conditions includes District Rule 4306 requirements for modifying their Title V permit. The facility has complied with these requirements.

Condition 8 from the ATC has been included as condition 41 of the requirements of the facility wide permit.

Conditions 9 through 20 from the ATC are included as conditions 1 through 12 of the requirements for this permit unit.

Conditions 21, 25, and 29 from the ATC were deleted. These conditions refer to an initial source test period and "shack down" period that has expired.

Conditions 22 through 24 from the ATC are included as conditions 13 through 15 of the requirements for this permit unit.

Conditions 26 through 28 from the ATC are included as conditions 16 through 18 of the requirements for this permit unit.

Conditions 30 through 43 from the ATC are included as conditions 19 through 32 of the requirements for this permit unit.

Conditions 33 through 34 have been added to the requirements for compliance with District Rule 4320 compliance.

C-311-36-13: 58.5 MMBTU/HR STRUTHERS THERMOFLOOD MODEL OH-50-ND-16XAM NATURAL GAS/LPG/WELL CASING GAS/TANK VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (SG #25-15) WITH A NORTH AMERICAN MODEL MAGNA-FLAME GLE LOW NOx BURNER SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS FROM SECTIONS 25D AND 6C ONLY

The facility is proposing to include ATC C-311-36-15 to remove fuel oil firing capability, limit CO emissions to 50 ppmvd @ 3% O2 (0.037 LB-CO/MMBTU), and retrofit the steam generator with a north american gle low-nox burner (or district approved equivalent) to achieve 15 ppmvd-NOx @ 3% O2 (0.018 lb-nox/mmbtu) for Rule 4306 compliance. The renewed PTO will be based on this ATC.

Condition 1 from the ATC has been removed. This condition includes District Rule 2520 requirements for modifying their Title V permit. The facility has complied with these requirements.

Condition 4 from the ATC has been included as condition 41 of the requirements of the facility wide permit.

Conditions 2 and 3 from the ATC are included as conditions 1 and 2 of the requirements for this permit unit.

Conditions 5 through 26 from the ATC are included as conditions 3 through 24 of the requirements for this permit unit.

Condition 27 from the ATC was deleted. This condition refers to an initial source test period that has expired.

Conditions 28 through 42 from the ATC are included as conditions 25 through 39 of the requirements for this permit unit.

Conditions 40 through 42 have been added to the requirements for compliance with District Rule 4320 compliance.

Conditions 43 through 45 from the ATC are included as conditions 43 through 45 of the requirements for this permit unit.

C-311-38-18: 58.5 MMBTU/HR SG 25-17 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE LOW-NOX BURNER (OR DISTRICT APPROVED EQUIVALENT) AND FLUE GAS RECIRCULATION SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS

The facility is proposing to include ATC C-311-38-17 to retrofit the steam generator with a north american gle low-nox burner (or DISTRICT approved equivalent) to achieve 15 ppmvd-NOx @ 3% o2 (0.0182 lb-nox/mmbtu). The renewed PTO will be based on this ATC.

Condition 1 from the ATC has been removed. This condition includes District Rule 2520 requirements for modifying their Title V permit. The facility has complied with these requirements.

Conditions 2 through 6 from the ATC have been removed. These conditions include District Rule 4306 requirements for modifying their Title V permit. The facility has complied with these requirements.

Conditions 7 through 24 from the ATC are included as conditions 1 through 18 of the requirements for this permit unit.

Conditions 25, 26, and 38 from the ATC were deleted. These conditions refer to an initial source test period and "shack down" period that has expired.

Conditions 27 through 29 from the ATC are included as conditions 19 through 21 of the requirements for this permit unit.

Conditions 31 through 59 from the ATC are included as conditions 22 through 50 of the requirements for this permit unit.

Conditions 51 through 53 have been added to the requirements for compliance with District Rule 4320 compliance.

C-311-42-12: 58.5 MMBTU/HR SG 25-21 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION SYSTEM

The facility is proposing to include ATC C-311-42-13 and -42-14 to retrofit the steam generator with a north american gle low-nox burner (or DISTRICT approved equivalent) to achieve 15 ppmvd-NOx @ 3% o2 (0.0182 lb-nox/mmbtu) and redesign convection/radiant sections respectively. The renewed PTO will be based on these ATC.

Condition 1 from the ATC has been removed. This condition includes District Rule 2520 requirements for modifying their Title V permit. The facility has complied with these requirements.

Condition 2 from the ATC has been included as condition 41 of the requirements of the facility wide permit.

Conditions 3 through 19 from the ATC are included as conditions 1 through 17 of the requirements for this permit unit.

Condition 20 from the ATC was deleted. This condition refers to an initial source test period that has expired.

Conditions 21 through 31 from the ATC are included as conditions 18 through 34 of the requirements for this permit unit.

Conditions 35 through 37 have been added to the requirements for compliance with District Rule 4320 compliance.

C-311-45-11: 58.5 MMBTU/HR SG 25-24 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16AXM, WITH A NORTH AMERICAN GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION SYSTEM

The facility is proposing to include ATC C-311-45-12 and -45-13 to retrofit the steam generator with a north american gle low-nox burner (or DISTRICT approved equivalent) to achieve 15 ppmvd-NOx @ 3% o2

(0.0182 lb-nox/mmbtu) and redesign convection/radiant sections respectively. The renewed PTO will be based on these ATCs.

Condition 1 from the ATC has been removed. This condition includes District Rule 2520 requirements for modifying their Title V permit. The facility has complied with these requirements.

Condition 2 from the ATC has been removed. This condition includes District Rule 2201 requirements for implementing ATC C-311-45-12. The facility has complied with these requirements.

Condition 3 from the ATC has been included as condition 41 of the requirements of the facility wide permit.

Conditions 4 through 20 from the ATC are included as conditions 1 through 17 of the requirements for this permit unit.

Condition 21 from the ATC was deleted. This condition refers to an initial source test period that has expired.

Conditions 22 through 38 from the ATC are included as conditions 18 through 34 of the requirements for this permit unit.

Conditions 35 through 37 have been added to the requirements for compliance with District Rule 4320 compliance.

C-311-76-10: 58.5 MMBTU/HR STRUTHERS THERMOFLOOD (SG 6-38) MODEL OH-50-ND-16XAM NATURAL GAS/LPG/TEOR GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL MAGNA FLAME GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION SYSTEM INCLUDING AN OXYGEN CONTROLLER

The facility is proposing to include ATC C-311-76-12 retrofit the steam generator with a north american model magna flame gle low nox burner to achieve 15 ppmvd-NOx @ 3% O2 (0.018 LB-NOX/MMBtu) for rule 4306 compliance. The renewed PTO will be based on this ATC.

Condition 1 from the ATC has been removed. This condition includes District Rule 2520 requirements for modifying their Title V permit. The facility has complied with these requirements.

Conditions 2 through 17 from the ATC are included as conditions 1 through 16 of the requirements for this permit unit.

Condition 18 from the ATC was deleted. This condition refers to an initial source test period that has expired.

Conditions 19 through 44 from the ATC are included as conditions 17 through 42 of the requirements for this permit unit.

Conditions 43 through 45 have been added to the requirements for compliance with District Rule 4320 compliance.

C-311-146-9: TANK #13-23: 84,546 GALLON (2,013 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING (2) 50 HP COMPRESSOR, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM FOR PERMIT UNITS C-311-112, -147, -149, -150, -196, -197, -198 AND -236

The facility is proposing to include ATC C-311-146-10 to remove tank C-311-149 and add tank C-311-236 to shared vapor recovery system. The renewed PTO will be based on this ATC.

Condition 1 from the ATC has been removed. This condition includes District Rule 2520 requirements for modifying their Title V permit. The facility has complied with these requirements.

Condition 2 from the ATC has been included as condition 41 of the requirements of the facility wide permit.

Conditions 3 through 63 from the ATC are included as conditions 1 through 61 of the requirements for this permit unit.

C. District Rule 2520 - Federally Mandated Operating Permits

Greenhouse Gas (GHG) 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.

D. District Rule 4101 - Visible Emissions

Section 5.0 prohibits the discharge of any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker in shade as that designated as No. 1 on the Ringelmann Chart; or is of such opacity as to obscure an observer's view to a degree equal to or greater than the smoke described in Section 5.1 of Rule 4101. Condition 22 of permit unit -0-2 ensures compliance.

E. District Rule 4306 – Boilers, Steam Generators, and Process Heaters – Phase 3

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

Section 5.1, NO_X and CO Emissions Limits

Section 5.1.1 requires that except for units subject to Sections 5.2, NO_x and carbon monoxide (CO) emissions shall not exceed the limits specified in the following table. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.0 percent by volume stack gas oxygen. Emission concentrations shall be corrected to 3.0 percent oxygen in accordance with Section 8.1.

Since permit units C-311-21-5, -25-4, -27-12, -28-14, -30-14, -36-13, -37-17, -27-24, -28-22, -29-38, -30-37, -31-36, -32-38, -33-41, -34-41, -35-33, -36-23, -38-18, -39-17, -40-16, -41-13, -42-12, -45-11, -52-12, -53-13, -76-10, and -84-10 are used as oilfield steam generators, the applicable emission limit category is listed

Category	Operated on gaseous fuel		Operated on liquid fuel	
	NO_X Limit	CO Limit	NO_X Limit	CO Limit
C. Oilfied Steam Generators	15 ppmv or 0.018 lb/MMBtu	400 ppmv	40 ppmv or 0.052 lb/MMBtu	400 ppmv

Compliance with the NO_X and CO emission requirements of this rule are demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-21-5	10
C-311-25-4	11
C-311-27-12	10
C-311-28-14	9
C-311-30-14	9
C-311-36-13	15
C-311-37-17	14
C-311-38-18	17
C-311-39-17	11
C-311-40-16	9
C-311-41-13	5
C-311-42-12	10
C-311-45-11	10
C-311-52-12	13
C-311-53-13	13
C-311-76-10	12
C-311-84-10	11

Section 5.2, Low Use

The units at this facility annual heat input will exceed the 9 billion Btu heat input per calendar year criteria limit addressed by this section. Since the units are not subject to Section 5.2, the requirements of this section will not be discussed.

Section 5.3, Startup and Shutdown Provisions

Section 5.3 states that on and after the full compliance schedule specified in Section 7.1, the applicable emission limits of Sections 5.1, 5.2.2 and 5.2.3 shall not apply during start-up or shutdown provided an operator complies with the requirements specified in Sections 5.3.1 through 5.3.4.

Section 5.3.1 states that the duration of each start-up or each shutdown shall not exceed two hours, except as provided in Section 5.3.3.

Section 5.3.2 states that the emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown.

Section 5.3.3 states that notwithstanding the requirement of Section 5.3.1, an operator may submit an application for a Permit to Operate condition to

allow more than two hours for each start-up or each shutdown provided the operator meets all of the conditions in specified in Sections 5.3.3.1 through 5.3.3.3.

Section 5.3.4 states that Permit to Operate (PTO) modifications solely to include start-up or shutdown conditions may be exempt from Best Available Control Technology (BACT) and emission offset requirements if the PTO modifications meet the requirements of Rule 2201 (New or Modified Stationary Source Review Rule) Section 4.2 (BACT Exemptions) and Rule 2201 Section 4.6 (Offset Exemptions).

Compliance with the start-up and shutdown requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-21-5	13, 14
C-311-25-4	14, 15
C-311-27-12	6, 7
C-311-28-14	5, 6
C-311-30-14	6, 7
C-311-36-13	17, 18
C-311-37-17	16, 17
C-311-38-18	19, 20
C-311-39-17	13, 14
C-311-40-16	11, 12
C-311-41-13	8, 9
C-311-42-12	13, 14
C-311-45-11	13, 14
C-311-52-12	15, 16
C-311-53-13	15, 16
C-311-76-10	15, 16
C-311-84-10	14, 15

Section 5.4, Monitoring Provisions

Section 5.4.1 states that the operator of any unit which simultaneously fires gaseous and liquid fuels, and is subject to the requirements of Section 5.1, shall install and maintain an operational non-resettable, totalizing mass or volumetric flow meter in each fuel line to each unit. Volumetric flow measurements shall be periodically compensated for temperature and pressure.

Section 5.4.2 states that the operator of any unit subject to the applicable emission limits in Sections 5.1 shall install and maintain an operational APCO approved Continuous Emissions Monitoring System (CEMS) for NOx, CO, and oxygen, or implement an APCO-approved Alternate Monitoring System. An APCO approved CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13 (except subsection h), 40 CFR Part 60 Appendix B (Performance Specifications) and 40 CFR Part 60 Appendix F (Quality Assurance Procedures, and applicable provisions of Rule 1080 (Stack Monitoring). An APCO approved Alternate Monitoring System shall monitor one or more of the following:

- periodic NOx and CO exhaust emission concentrations,
- periodic exhaust oxygen concentration,
- flow rate of reducing agent added to exhaust,
- catalyst inlet and exhaust temperature,
- catalyst inlet and exhaust oxygen concentration,
- periodic flue gas recirculation rate,
- other operational characteristics.

Section 5.4.3 states requirements for units that are limited to a heat input less than 9 billion Btu per year. The applicant does not operate any units that are limit to a annul heat input less than 9 billion Btu; therefore the requirements of this section are not applicable to the unit in this project.

Section 5.4.4 states that the operator of any Category H unit listed in Section 5.1.1 Table 1 and any unit subject to Section 5.2.1 or 5.2.2 shall install and maintain an operational non-resettable, totalizing mass or volumetric flow meter in each fuel line to each unit. Volumetric flow measurements shall be periodically compensated for temperature and pressure. A master meter, which measures fuel to all units in a group of similar units, may satisfy these requirements if approved by the APCO in writing. The cumulative annual fuel usage may be verified from utility service meters, purchase or tank fill records, or other acceptable methods, as approved by the APCO.

Section 5.4.5 states the requirements for an APCO approve alternative monitoring system. The applicant only uses APCO approved monitoring schemes; therefore the requirements of this section are not applicable to the unit in this project.

Cornpliance with the monitoring provisions of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-21-5	24, 25, 26
C-311-25-4	25, 26, 27
C-311-27-12	23, 24, 25
C-311-28-14	23, 24, 25
C-311-30-14	23, 24, 25
C-311-36-13	20, 21, 22
C-311-37-17	19, 20, 21
C-311-38-18	33, 34, 35
C-311-39-17	27, 28, 29
C-311-40-16	23, 24, 25
C-311-41-13	21, 22, 23
C-311-42-12	24, 25, 26
C-311-45-11	24, 25, 26
C-311-52-12	31, 32, 33
C-311-53-13	30, 31, 32
C-311-76-10	28, 29, 30
C-311-84-10	28, 29, 30

Section 5.5, Compliance Determination

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. 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_x 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.

Compliance with the requirements in Section 5.5 of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-21-5	16, 17, 22, 26
C-311-25-4	17, 18, 23, 27
C-311-27-12	14, 17, 18, 25
C-311-28-14	13, 17, 18, 25
C-311-30-14	14, 17, 18, 25
C-311-36-13	22, 24, 26, 32
C-311-37-17	21, 23, 25, 30
C-311-38-18	24, 25, 28, 35
C-311-39-17	17, 21, 22, 29
C-311-40-16	15,17, 18, 25
C-311-41-13	13, 15, 16, 23
C-311-42-12	16, 17, 22, 26
C-311-45-11	16,17, 22, 26
C-311-52-12	20, 21, 34, 32
C-311-53-13	20, 21, 24, 32,
C-311-76-10	20, 21, 22, 30
C-311-84-10	19, 20, 21, 30,

Section 6.1, Recordkeeping

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.4 shall be maintained for five calendar years and shall be made available to the APCO upon request. 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 6.1.1 applies to units seeking exemption under Section 4.2. None of the units at this facility are subject to the exemption.

Section 6.1.2 requires that the operator of a unit subject to Category H unit listed in Section 5.1.1 Table 1 or to Section 5.2 shall record the amount of fuel use at least on a monthly basis.

Section 6.1.3 requires that the operator of a unit subject to Section 5.2.1 or 6.3.1 shall maintain records to verify that the required tune-up and the required monitoring of the operational characteristics have been performed. Section 6.3.1 states that tune-ups required by Sections 5.2.1 and 6.3.1 do not need to be performed for units that operate and maintain an APCO approved CEMS or an APCO approved Alternate Monitoring System where the applicable emission limits are periodically monitored. All the units in this project maintain an APCO approved Alternate Monitoring System where the applicable emission limits are periodically monitored; therefore the requirements of this section are not applicable to the units in this project.

Section 6.1.4 requires the operator performing start-up or shutdown of a unit shall keep records of the duration of start-up or shutdown.

Compliance with the recordkeeping requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-21-5	13
C-311-25-4	14
C-311-27-12	6
C-311-28-14	5
C-311-30-14	6
C-311-36-13	17
C-311-37-17	16
C-311-38-18	19
C-311-39-17	13
C-311-40-16	10
C-311-41-13	8
C-311-42-12	13
C-311-45-11	13
C-311-52-12	15
C-311-53-13	15,
C-311-76-10	16
C-311-84-10	15,

Section 6.2, Test Methods

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

Pollutant	Units	Test Method Required
NO_X	ppmv	EPA Method 7E or ARB Method 100
NO_X	lb/MMBtu	EPA Method 19
CO	ppmv	EPA Method 10 or ARB Method 100
Stack Gas O_2	%	EPA Method 3 or 3A, or ARB Method 100
Stack Gas Velocities	ft/min	EPA Method 2
Stack Gas Moisture Content	%	EPA Method 4

In addition, fuel hhv shall be certified by third party fuel supplier or determined by: 6.2.1.1 ASTM D 240-87 or D 2382-88 for liquid hydrocarbon fuels; 6.2.1.2 ASTM D 1826-88 or D 1945-81 in conjunction with ASTM D 3588-89 for gaseous fuels.

Compliance with the test method requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-21-5	8, 19, 20, 21,
C-311-25-4	7, 20, 21, 22
C-311-27-12	20, 21, 22, 31
C-311-28-14	19, 20, 21, 31, 32
C-311-30-14	20, 21, 22, 31
C-311-36-13	14, 29, 30, 31
C-311-37-17	13, 27, 28, 29
C-311-38-18	14, 29, 30, 31, 32
C-311-39-17	24, 25, 26, 35
C-311-40-16	20, 21, 22, 31
C-311-41-13	18, 19, 20, 30
C-311-42-12	7, 19, 20, 21
C-311-45-11	7, 19, 20, 21
C-311-52-12	10, 25, 26, 27, 28
C-311-53-13	10, 25, 26, 27, 28
C-311-76-10	10, 25, 26, 27
C-311-84-10	24, 25, 26, 27,

Section 6.3, Compliance Testing

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.

In addition, since the applicant has proposed to use pre-approved Alternate Monitoring Scheme "A" using a portable analyzer, the tune-up requirements listed in Section 6.3.1 are not applicable to the boilers/steam generators. Section 6.3.1 also requires that, during the 36-month source testing interval, the owner/operator shall monthly monitor the operational characteristics recommended by the unit manufacturer. Since the pre-approved Alternate Monitoring Scheme "A" using a portable analyzer requires monthly monitoring of NO_X, CO, and O_2 exhaust emissions concentrations, operational characteristics monitoring requirement is satisfied, and no further discussion is required.

Section 6.3.2 states that in lieu of compliance with Section 6.3.1, compliance with the applicable emission limits in Sections 5.1 or 5.2.3 shall be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided:

- All units in the group are initially source tested. The emissions from all test runs from units within the group are less than 90% of the permitted value, and the emissions do not vary greater than 25% from the average of all test runs; and
- All units in a group are similar in terms of rated heat input, make and series, operational conditions, fuel used, and control method. No unit with a rated heat input greater than 100 MMBtu shall be considered as part of the group; and
- The group is owned by a single owner and is located at a single stationary source; and
- Selection of the representative unit(s) is approved by the APCO prior to testing; and
- The number of representative units source tested shall be at least 30% of the total number of units in the group. The representative tests shall rotate each year so that within three years all units in the group have been tested at least once.
- All units in the group shall have received the similar maintenance and tune-up procedures as the representative unit(s) as listed in the Permit to Operate. The operator shall submit to the APCO the specific maintenance procedures to be performed on each unit that will be included in the group for representative testing. Such maintenance

procedures shall be specified in the Permit to Operate for units that are included in the group for representative testing. Any maintenance work on a unit which has no effect on emissions standards and which is not specified in the maintenance procedures shall be submitted to the APCO for approval before such unit can be included as part of the group for representative testing. Any unit that necessitates any maintenance work which has an effect on emission standards and is beyond the maintenance procedures identified in the Permit to Operate, shall not be included as part of the group for representative testing. The unit shall be source tested in accordance with the provisions of Section 6.3.1; and

- Should any of the representative units exceed the required emission limits, each of the units in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested units being in violation of this rule. After compliance with the requirements of Section 6.3.2.7 has been demonstrated, subsequent source testing shall be performed pursuant to Sections 6.3.1 or 6.3.2.

The facility has not requested any of the aforementioned options; therefore, this section does not apply.

F. District Rule 4320 – Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater Than 5 MMBtu/hr

The purpose of this rule is to limit emissions of oxides of nitrogen (NOx), carbon monoxide (CO), oxides of sulfur (SO_2), and particulate matter 10 microns or less (PM10) from boilers, steam generators, and process heaters. This rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input greater than 5 million Btu per hour.

Per Section 5.1 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.

The facility will comply with section 5.3 and 5.4.

Section 5.3 Annual Fee Calculation

Per Section 5.3.1, on and after January 1, 2010, an operator, with units that will comply under Section 5.1.2, shall pay a total annual fee to the District based on the total NOx emissions from those units. That fee shall be calculated in the following manner.

- The operator shall calculate the total emissions for all units operating at a stationary source that will comply with Section 5.1.2. The total NOx emissions shall be calculated in accordance with Section 5.3.1.3.
- The total annual emissions fee shall be calculated in accordance with Section 5.3.1.4. These calculations include only the units that have been identified to comply under Section 5.1.2.
- Total Emissions (TE) Calculation

$$\text{Total TE} = \Sigma E(\text{unit})$$

Where: $\Sigma E(\text{unit})$ = Sum of all NOx emissions from each unit, in tons per year.

$$E(\text{unit}) = \frac{EF\ (\text{unit}) \times AFU\ (\text{Unit})}{2{,}000\ \text{lb per ton}}$$

Where: E(unit) = Annual NOx emissions for each unit, in tons/year.
EF(Unit) = NOx Emission Limit for the Permit to Operate, in lb/MMBtu
AFU(Unit) = actual amount of fuel, in MMBTU, used by each unit during the previous calendar year.

- Total Annual Fee Calculation

Total Annual Fee = (Total TE x FR) + Administrative Fee

Where: FR (Fee Rate) = The cost of NOx reductions, in dollars per ton, as established pursuant to Sections 7.2 and 7.6 of District Rule 9510, as adopted on December 15, 2005. Under no circumstances shall the cost of NOx reductions exceed the cost effectiveness threshold for the Carl Moyer Cost Effectiveness as established by the applicable state law.

Administrative Fee = 4% x (Total TE x FR)

- The operator shall pay the total annual fee to the District, no later than July 1 of each year, for the emissions of the previous calendar year. The first payment is due to the District no later than July 1, 2010. Should July 1 fall on a day when the District is closed, the payment shall be made by the next District working day after July 1.

Per 5.3.2 Payments shall continue annually until the unit either is permanently removed from use in the San Joaquin Valley Air Basin and the Permit to Operate is surrendered or the operator demonstrates compliance with applicable NOx emissions limits shown in Table 2:

Table 2 Applicable NOx Emission Limits for Section 5.3.2		
Category	Date of Compliance Demonstration	Applicable NOx Emissions Limit from Table 1
A. Units with only a Standard Schedule in Table 1.	Either prior to or after the Standard Compliance Deadline	Standard NOx Limit
B. Units with both Standard and Enhanced Schedules in Table 1.	Prior to the Enhanced Compliance Deadline	Standard NOx Limit
	After the Enhanced Compliance Deadline	Enhanced NOx Limit
C. Units with both Standard and Staged Enhanced Schedules in Table 1.	Prior to the Initial Limit Compliance Deadline	Standard NOx Limit
	After the Initial Limit Deadline but before the Final Limit Deadline	Initial NOx Limit then the Final NOx Limit by the applicable Cornpliance Deadline
	After the Final Limit Deadline	Final NOx Limit

Per 5.3.2.1, the emissions fee for units that operate for less than the full calendar year before demonstrating compliance under Section shall be based on the actual fuel used during the portion of the calendar year prior to demonstrating that compliance or removing the unit from operation within the San Joaquin Valley Air Basin.

Per 5.3.3 Operators of units for which an annual emissions fee is provided must also certify that the units meet federal RACT control requirements at the time the annual fee is provided.

5.4 Particulate Matter Control Requirements

Per 5.4.1 to limit particulate matter emissions, an operator shall comply with one of the following requirements:

- 5.4.1.1 On and after the applicable NOx 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 NOx 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 NOx Compliance Deadline specified in Section 5.2 Table 1, operators shall install and properly operate an emission control system that reduces SO_2 emissions by at least 95% by weight; or limit exhaust SO_2 to less than or equal to 9 ppmv corrected to 3.0% O2.
- 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.

Per 5.4.2 Liquid fuel shall be used only during PUC quality natural gas curtailment periods, provided the requirements of Sections 4.2 and 6.1.5 are met and the fuel contains no more than 15 ppm sulfur, as determined by the test method specified in Section 6.2.

The facility has received ATC permits for compliance with the sulfur requirements of this rule and will be in compliance when the ATCs are implemented.

The units at the facility that are subject to this rule are listed below, along with the condition that ensures compliance with this section.

Permit Unit(s)	Permit Condition(s)
C-311-21-5	32, 33, 34
C-311-25-4	33, 34, 35
C-311-27-12	45, 46, 47
C-311-28-14	44, 45, 46
C-311-30-14	39, 40, 41
C-311-36-13	40, 41, 42
C-311-37-17	46, 47, 48
C-311-38-18	51, 52, 53

C-311-39-17	53, 54, 55
C-311-40-16	41, 42, 43
C-311-41-13	44, 45, 46
C-311-42-12	35, 36, 37
C-311-45-11	35, 36, 37
C-311-52-12	44, 45, 46
C-311-53-13	44, 45, 46
C-311-76-10	43, 44, 45
C-311-84-10	39, 40, 41

G. 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 wells. This rule is applicable to all steam-enhanced crude oil production wells and any associated vapor collection and control systems.

Per Section 4.3, The requirements of this rule shall not apply to up to 40 cyclic wells owned by a company and undergoing well stimulation, provided;
Section 4.3.1, the well is located more than 1000 feet from an existing well vent vapor collection and control system operated by the company.

a. C-311-205-2: 20 OPEN-VENT CYCLIC WELLS

Conditions 1 and 2 on the draft PTO ensure compliance with the rule.

Current District Rule 4401 (amended 6/16/11) has not been SIP approved. Attachment D contains the streamlining of the SIP approved District Rule 4401 (1/15/98) to the current District Rule 4401 to show the current rule is as stringent if not more than the SIP approved version.

Per Section 5.1, an operator shall not operate a steam-enhanced crude oil production well unless the operator complies with the requirements of either Section 5.1.1 or Section 5.1.2.

- 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. 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.
- 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.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-77-5	4
C-311-78-3	4
C-311-79-6	4
C-311-83-4	4
C-311-105-3	4
C-311-106-2	4
C-311-111-4	4
C-311-112-9	4

Section 5.2 has the determination of compliance with the leak standards. Per Section 5.2.1, an operator shall be in violation of this rule if any District inspection demonstrates that one or more of the conditions in Section 5.2.2 exist at the facility or if any operator inspection conducted pursuant to Section 5.4 demonstrates that one or more of the conditions in Section 5.2.2 exist at the facility.

Section 5.2.2 contains leak standards. The following conditions shall be used for determination of violation during an inspection pursuant to the provisions of Section 5.2.1:
- 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 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.
- Existence of a component with a major liquid leak as defined in Section 3.0.
- Existence of a component with a gas leak greater than 50,000 ppmv.

- Existence of a component leak described in Section 5.6.2.4.1 through Section 5.6.2.4.3 in excess of the allowable number of leaks specified in Table 3.
- A minor liquid leak, or
- A minor gas leak, or
- A gas leak greater than 10,000 ppmv up to 50,000 ppmv.

Table 2 Number of Allowable Leaks

Number of Steam-Enhanced Crude Oil Production Wells Connected to a VOC Collection and Control System	Number of Allowable Leaks
1 to 25	3
26 to 50	6
51 to 100	8
101 to 250	10
251 to 500	15
More than 500	One (1) for each 20 wells tested with a minimum of 50 wells tested.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	**Permit Condition(s)**
C-311-77-5	5, 6
C-311-78-3	5, 6
C-311-79-6	5, 6
C-311-83-4	5, 6
C-311-105-3	6, 7
C-311-106-2	6, 7
C-311-111-4	5,6
C-311-112-9	5, 6

5.3 An operator shall comply with the following operating requirements:

- An operator shall not use any component with a leak as defined in Section 3.0, or that is found to be in violation of the provisions of Section 5.2.2. 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 this rule.

- 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.
- An operator shall comply with the requirements of Section 6.7 if there is any change in the description of major components or critical components.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-77-5	7, 8, 9
C-311-78-3	7, 8, 9
C-311-79-6	7, 8, 9
C-311-83-4	7, 8, 9
C-311-105-3	8, 9
C-311-106-2	8, 9
C-311-111-4	7, 8, 9
C-311-112-9	7, 8, 9

Per Section 5.4 unless otherwise specified, an operator shall perform all component inspections and gas leak measurements pursuant to the requirements of Section 6.3.3.

Per Section 5.4.1, except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 at least once every year.

Per Section 5.4.2, an operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of this rule.

Per Section 5.4.3, in addition to the inspections required by Section 5.8.1, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows:

- An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week.
- Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of this rule.

Per Section 5.4.4, in addition to the inspections required by Section 5.4.1, Section 5.4.2 and Section 5.4.3, an operator shall perform the following inspections:

- An operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. An operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection.
- An operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service.
- Except for PRDs subject to the requirements of Section 5.4.4.1, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced.

Per Section 5.4.7, an operator shall inspect all unsafe-to-monitor components during each turnaround.

Per Section 5.4.8, a District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-77-5	10 through 15
C-311-78-3	10 through 15
C-311-79-6	10 through 15
C-311-83-4	10 through 15
C-311-105-3	10 through 13
C-311-106-2	10 through 13
C-311-111-4	10 through 15
C-311-112-9	10 through 15

Per Section 5.5.1, an operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. An operator shall include the following information on the tag:
- The date and time of leak detection.
- The 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.

Per Section 5.2.2, 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, and
- Re-inspected the component using the test method in Section 6.3.3, and
- The component is found to be in compliance with the requirements of this rule.

Per 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.

Per 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 requirements of Section 5.5.4.1, Section 5.5.4.2, or Section 5.5.4.3 as soon as practicable but not later than the time period specified in Table 3.
- Repair or replace the leaking component; or
- Vent the leaking component to a VOC collection and control system as defined in Section 3.0, or
- Remove the leaking component from operation.

Table 3 Repair Period

Type of Leak	Repair Period in Calendar Days
Gas Leaks	
Minor Gas Leak	14
Major Gas Leak less than or equal to 50,000 ppmv	5
Gas Leak greater than 50,000 ppmv	2
Liquid Leaks	
Minor Liquid Leak	3
Major Liquid Leak	2

Per 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 4.

Per Section 5.5.6, the time of the initial leak detection shall be the start of the repair period specified in Table 4.

Per 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.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-77-5	16 through 23
C-311-78-3	16 through 23
C-311-79-6	16 through 23
C-311-83-4	16 through 23
C-311-105-3	15 through 21
C-311-106-2	15 through 21
C-311-111-4	16 through 23
C-311-112-9	16 through 23

Per 6.1 an operator shall maintain the records required by Sections 6.1 and Section 6.2 for a period of five (5) years. These records shall be made available to the APCO, California Air Resources Board (ARB), and EPA upon request.

- 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.
- 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.
- 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.
- The inspection log maintained pursuant to Section 6.4.
- 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.
- An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5.
- An operator shall keep a copy of the APCO-approved Operator Management Plan at the facility.
- 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.
- 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.
- 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.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-77-5	24 through 32
C-311-78-3	24 through 32
C-311-79-6	21 through 32
C-311-83-4	21 through 32
C-311-105-3	22 through 24
C-311-106-2	22 through 24
C-311-111-4	21 through 32
C-311-112-9	21 through 32

Section 6.2 contains this rules compliance source testing requirements.

Per Section 6.2.1, an operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature.

Per Section 6.2.2, if approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection and control system are controlled by a device meeting one of the requirements in Sections 6.2.2.1 through 6.2.2.3..

- An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines – Phase 2); or
- A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters – 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters – 0.075 MMBtu/hr to 2.0 MMBtu/hr); or
- A unit subject to District Rule 4311 (Flares).

Per Section 6.2.3, An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0:

- 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 6.1.9.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-77-5	33 through 35
C-311-78-3	33 through 35
C-311-79-6	33 through 35
C-311-83-4	33 through 35
C-311-111-4	33 through 35
C-311-112-9	33 through 35

Test methods that are equivalent to those test methods specified in Section 6.3.1 through Section 6.3.4 may be used provided that such equivalent test methods have been previously approved, in writing, by the EPA, ARB, and the APCO.
Per Section 6.3.1, 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.

Per Section 6.3.2, 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.

Per Section 6.3.3 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.

Per Section 6.3.4, 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.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-77-5	36 through 39
C-311-78-3	36 through 39
C-311-79-6	36 through 39
C-311-83-4	36 through 39
C-311-105-3	25
C-311-106-2	25
C-311-111-4	36 through 39
C-311-112-9	36 through 39

Per Section 6.4, an 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, and the total number and percentage of leaking components found by component type.
- The location, type, and name or description of each leaking component and description of any unit where the leaking component is found.
- The 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.
- The 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.

- The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier.
- 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.
- 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.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-77-5	40
C-311-78-3	40
C-311-79-6	40
C-311-83-4	40
C-311-105-3	26
C-311-106-2	26
C-311-111-4	40
C-311-112-9	40

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

Per Section 6.6, by June 30, 2008, 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 below. The Operator Management Plan shall include, at a minimum, all of the following information:

- A description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt pursuant to Section 4.0 of this rule.

- Identification and description of any known hazard that might affect the safety of an inspector.
- Except for pipes, the number of components that are subject to this rule by component type.
- Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation.
- Except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description).
- Except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 shall be submitted with the Operator Management Plan.
- A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by this rule will be performed by a qualified contractor or by an in-house team.
- A description of the training standards for personnel that inspect and repair components.
- A description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary.

Per 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.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-77-5	41 through 43
C-311-78-3	41 through 43
C-311-79-6	41 through 43
C-311-83-4	41 through 43
C-311-105-3	27 through 29
C-311-106-2	27 through 29
C-311-111-4	41 through 43
C-311-112-9	41 through 43

Per Section 6.8, The APCO shall provide written notice to the operator of the approval or incompleteness of a new or revised Operator Management Plan within 60 days of receiving such Operator Management Plan. If the APCO fails to respond in writing within 60 days after the date of receiving the Operator Management Plan, it shall be deemed approved. No provision of the Operator Management Plan, approved or not, shall conflict with or take precedence over any provision of this rule.

H. District Rule 4621 - <u>Gasoline Transfer Into Stationary Storage Containers, Delivery Vessels, And Bulk Plants</u>

This rule applies to storage containers located at bulk plants with capacities greater than 250 gallons and less than 19,800 gallons; to other stationary storage containers with capacities greater than 250 gallons; and to those storage containers that are not subject to the control requirements of Rule 4623 (Storage of Organic Liquids) Section 5.0. The rule also applies to gasoline delivery vessels.

Section 5.1 states "loading equipment and vapor collection equipment shall be installed, maintained, and operated such that it is leak-free, with no excess organic liquid drainage at disconnect."

Section 3.19.2 defines a leak as the dripping of VOC-containing liquid at a rate of more than three (3) drops per minute, or the detection of any gaseous or vapor emissions with a concentration or total organic compound greater than 10,000 ppmv, as methane, above background when measured in accordance with the test method in Section 6.4.3. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component or equipment into a container is not considered sampling of a leak provided such activities are

accomplished as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere.

Compliance with these requirements is assured by conditions 4 and 5 on the proposed PTO C-311-227-1.

Section 5.2.1 states "no person shall transfer, or permit the transfer, of gasoline from any delivery vessel into any stationary storage container subject to the requirements of this rule unless such container is equipped with an ARB certified permanent submerged fill pipe and utilizes an ARB certified Phase I vapor recovery system that is maintained and operated according to manufacturer specifications and the applicable ARB Executive Order." Since this unit is already equipped with ARB certified Phase I vapor recovery system, requirements of this section are satisfied and compliance is assured by condition 1 on the proposed PTO C-311-227-1.

Section 5.4.1 states "all aboveground storage containers shall be constructed and maintained in a leak-free condition." Compliance is assured by condition 3 on the proposed PTO C-311-227-1.

Section 5.4.5 states "operators of an aboveground storage container not located at a bulk plant shall conduct and pass the performance test specified in Sections 6.4.9 to determine compliance at least once every 36 months, (no more than 30 days before or after the required performance test date) unless otherwise required under ARB Executive Order." Section 6.4.9 specifies the "Static Leak Test for Aboveground Tanks" using ARB Test Procedure TP-206.3 or ARB Test Procedure TP-201.3B as applicable. Compliance with these requirements is assured by condition 15 on the proposed PTO C-311-227-1.

Section 5.5 states "All Phase I vapor recovery systems shall be inspected according to the frequency specified in Table 1. The person conducting the inspections shall, at a minimum, verify that the fill caps and vapor caps are not missing, damaged, or loose, that the fill cap gasket and vapor cap gaskets are not missing or damaged, that the fill adapter and vapor adapter are securely attached to the risers, that, where applicable, the spring-loaded submerged fill tube seals properly against the coaxial tubing, and the dry break (poppet-valve) is not missing or damaged and that the submerged fill tube is not missing or damaged." Compliance with these requirements is assured by conditions 10 and 11 on the proposed PTO C-311-227-1.

Section 5.7.2 states "no person shall operate, or allow the operation of a delivery vessel unless valid State of California decals which attest to the

vapor integrity of the container are displayed." Compliance is assured by condition 6 on the proposed PTO C-311-227-1.

Section 6.1.4 states "all records required to demonstrate compliance with the requirements of this rule shall be retained on the premises for a minimum of five years and made available on site during normal business hours to the APCO, ARB, or EPA, and submitted to the APCO, ARB, or EPA upon request." Compliance with this requirement is assured by conditions 23 and 24 on the proposed PTO C-311-227-1.

Section 6.2.3 states "Operators shall notify the District at least seven days prior to any performance testing." Compliance is assured by condition 19 on the proposed PTO C-311-227-1.

Section 6.2.4 states "Operators shall submit all performance test results to the District within 30 days of test completion." Compliance is assured by condition 19 on the proposed PTO C-311-227-1.

Section 6.3.1 states "on and after June 20, 2008, installation and maintenance contractors shall be certified by the ICC for Vapor Recovery System Installation and Repair (VI) and make available onsite proof of ICC certification for VI, and have and make available on site proof of any and all certifications required by the Executive Order and installation and operation manual in order to install or maintain specific systems, or work under the direct and personal supervision of an individual physically present at the work site who possesses and makes available onsite a current certificate from the ICC, indicating he or she has passed the VI exam and all certifications required by the applicable Executive Order."

Section 6.3.2 states "All ICC certifications shall be renewed every 24 months by passing the appropriate exam specific to the certification being sought."

Section 6.3.3 states "Effective on and after March 21, 2008, Gasoline Dispensing Facility Testers wishing to conduct vapor recovery system testing and repair at facilities located within the District, shall be in full compliance with District Rule 1177 (Gasoline Dispensing Facility Tester Certification)."

Compliance with these requirements is assured by conditions 17 and 18 on the proposed PTO C-311-227-1

Section 6.3.3 states "Effective on and after March 21, 2008, Gasoline Dispensing Facility Testers wishing to conduct vapor recovery system

testing and repair at facilities located within the District, shall be in full compliance with District Rule 1177 (Gasoline Dispensing Facility Tester Certification)." Compliance with these requirements is assured by condition 16 on the proposed PTO C-311-227-1

I. District Rule 4622 - Transfer of Gasoline Into Vehicle Fuel Tanks

This rule applies to any gasoline storage and dispensing operation or mobile fueler from which gasoline is transferred into motor vehicle fuel tanks, except as provided in Section 4.0.

Section 3.25 defines a retail gasoline outlet as an establishment at which gasoline is sold or offered for sale to the general public for use in motor vehicles. Compliance with these requirements is assured by condition 2 on the proposed PTO C-311-227-1.

Section 5.1 states "a person shall not transfer or permit the transfer of gasoline from any stationary storage container, or from any mobile fueler with a capacity greater than 120 gallons, into a motor vehicle fuel tank with a capacity greater than 5 gallons, unless the gasoline dispensing unit used to transfer the gasoline is equipped with and has in operation an ARB certified Phase II vapor recovery system."

Section 5.1.1 states "all ARB certified Phase II vapor recovery systems shall be maintained according to ARB certifications and the manufacturer specifications applicable to the system." Since this unit is already equipped with ARB certified Phase II vapor recovery system, requirements of this section are satisfied and compliance is assured by condition 1 on the proposed PTO C-311-227-1

Section 5.1.2 states "all ARB certified Phase II vapor recovery systems and gasoline dispensing equipment shall be maintained without leaks as determined in accordance with the test method in Section 6.5.4."

Section 6.5.4 states "detection of leaks shall be in accordance with EPA Test Method 21."

Section 3.17 defines a leak as the dripping of VOC-containing liquid at a rate of more than three (3) drops per minute, or the detection of any gaseous or vapor emissions with a concentration or total organic compound greater than 10,000 ppmv, as methane, above background when measured in accordance with the test method in Section 6.5.4. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component or equipment into a

container is not considered sampling of a leak provided such activities are accomplished as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere.

Compliance with these requirements is assured by conditions 4 and 5 on the proposed PTO C-311-227-1

Section 5.2.1 states "any gasoline dispensing system subject to this rule shall comply with the provisions of this rule at the time of installation."

Section 5.2.3 states "installation and maintenance contractors shall, be certified by the ICC for Vapor Recovery System Installation and Repair by June 20, 2008, renew the ICC certification for Vapor Recovery System Installation and Repair every 24 months, make available onsite proof of ICC certification, and have and make available on site proof of any and all certifications required by the Executive Order and installation and operation manual in order to install or maintain specific systems."

Section 5.2.4 states "in lieu of complying with Sections 5.2.3.1 through 5.2.3.4, installation and maintenance contractors may work under the direct and personal supervision of an individual physically present at the work site who possesses and makes available on site current certifications from the ICC, indicating he or she has passed the ICC Vapor Recovery System Installation and Repair exam and all other certifications required by the applicable Executive Order."

Compliance with these requirements is assured by conditions 17 and 18 on the proposed PTO C-311-227-1.

Section 5.3.1 states "the owner or operator of an ARB certified Phase II vapor recovery system shall conduct periodic maintenance inspections to ensure that components of the vapor recovery system are in proper operating condition."

Section 5.3.2 states "the frequency of inspections shall be based on the operation's largest monthly gasoline throughput from the previous calendar year as indicated in Table 1."

Section 5.3.4 states "the frequency of vapor path inspections shall be based on the amount of gasoline dispensed by the operation in a calendar month as indicated in Table 1."

Section 5.3.5 states "the person conducting the inspections shall at a minimum, verify that the fueling instructions required by Section 5.5 are

clearly displayed with the appropriate toll-free complaint phone number and toxic warning signs, that the following nozzle components are in place and in good condition as specified in ARB Executive Orders: faceplate/facecone, bellows, latching device spring, vapor check valve, spout (proper diameter/vapor collection holes), insertion interlock mechanism, automatic shut-off mechanism, hold open latch, that the hoses are not torn, flattened or crimped, that the vapor path of coaxial hoses associated with bellows equipped nozzles does not contain more than 100 ml of liquid and that the vapor processing unit is functioning properly, for operations that are required to have or possess such a unit.

Compliance with these requirements is assured by conditions 10 through 12 on the proposed PTO C-311-227-1

Section 5.4.1 states "no person shall operate any ARB certified Phase II vapor recovery system or any portion thereof that has a major defect or an equipment defect that is identified in any applicable ARB Executive Order, until: The defect has been repaired, replaced, or adjusted as necessary to correct the defect; The District has been notified, and the District has reinspected the system or authorized the system for use. Such authorization shall not include the authority to operate the equipment prior to the correction of the defective components; and all major defects, after repair, are duly entered into the Operations and Maintenance (O&M) manual." Compliance with these requirements is assured by condition 7 on the proposed PTO C-311-227-1

Section 5.4.2 states "upon identification of any major defects, the owner or operator shall tag "Out-of-Order" all dispensing equipment for which vapor recovery has been impaired."

Section 5.4.2.1 states "tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defective equipment has been repaired, replaced, or adjusted, as necessary."

Section 5.4.2.2 states "in the case of defects identified by the District, tagged equipment shall be rendered inoperable, and the tag shall not be removed until the District has been notified of the repairs, and the District has either reinspected the system or authorized the tagged equipment for use."

Compliance with these requirements is assured by condition 8 on the proposed PTO C-311-227-1.

Section 5.4.4 states "in the event of a separation due to a drive off, the owner or operator shall complete one of the following, unless otherwise specified in the applicable ARB Executive Order, and document the activities in accordance with Section 6.2, before placing the affected equipment back in service:"

1) Conduct a visual inspection of the affected equipment, perform qualified repairs on any damaged components, and conduct applicable re-verification tests pursuant to Sections 6.5.1.1 and 6.5.1.4, or"
2) Conduct a visual inspection of the affected equipment and replace the affected nozzles, coaxial hoses, breakaway couplings, and any other damaged components with new or certified rebuilt components that are ARB certified, before placing affected equipment back in service."

Compliance with these requirements is assured by condition 13 on the proposed PTO C-311-227-1

Section 6.2.1 states "operators shall retain the test result verification that each ARB certified Phase II vapor recovery system meets or exceeds the requirements of the tests specified in Section 6.5. These verifications shall be maintained for at least five years. These test results shall be dated and shall contain the names, addresses, and telephone numbers of the companies responsible for system installation and testing." Compliance with these requirements is assured by condition 20 on the proposed PTO C-311-227-1

Section 6.2.2 states "a person who performs repairs on any ARB certified Phase I or Phase II vapor recovery system shall provide to the owner or operator a repair log, which the owner or operator shall maintain on the premises for at least five years and which shall include all of the following:"

1) Date and time of each repair;
2) The name and applicable certification numbers of the person(s) who performed the repair, and, if applicable, the name, address and phone number of the person's employer;
3) Description of service performed;
4) Each component that was repaired, serviced, or removed;
5) Each component that was installed as replacement, if applicable;
6) Receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs.

Compliance with these requirements is assured by condition 21 on the proposed PTO C-311-227-1

Section 6.2.3 states "each operator who is required to perform periodic maintenance inspections under Section 5.3 shall maintain monthly gasoline throughput records on the premises for a minimum of five years, make them available on site during normal business hours to the APCO, ARB, or EPA, and submit them to the APCO, ARB, or EPA upon request." Compliance with this requirement is assured by conditions 23 and 24 on the proposed PTO C-311-227-1.

Section 6.3.1 states "the owner or operator of a gasoline dispensing operation shall maintain an O&M Manual in accordance with Section 6.3."

Section 6.3.2 states "the O&M manual shall be kept at the dispensing operation and made available to any person who operates, inspects, maintains, repairs, or tests the equipment at the operation as well as to District personnel upon request."

Section 6.3.3 states "the O&M manual shall, at a minimum, include the following current information:"

1) copies of all vapor recovery performance tests,
2) all applicable ARB Executive Orders, Approval Letters, and District Permits,
3) manufacturer's specifications and instructions for installation, operation, repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction provided by the manufacturer,
4) system and/or component testing requirements, including test schedules and passing criteria for each of the standard tests listed in Section 6.0. The owner/operator may include any non-ARB required diagnostic and other tests as part of the testing requirements, and
5) additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, ARB Executive Orders, and District permit conditions, including replacement schedules for failure or wear prone components.

Section 6.3.4 states "owners or operators of gasoline dispensing operations shall document the periodic maintenance inspection program in the O&M manual."

Compliance with these requirements is assured by conditions 9 and 22 on the proposed PTO C-311-227-1

Section 6.4.1 states "operators shall comply with the ARB certified Phase II vapor recovery system performance tests specified in Sections 6.4.1.1

through 6.4.1.4 and shall conduct all applicable performance tests at start up and thereafter (no more than 30 days before or after the required compliance testing date) as required by ARB Executive Order and installation and operation manuals."

Section 6.4.1.1 states "conduct and pass a Static Leak Test of the ARB certified Phase II vapor recovery system at least once every twelve months."

Section 6.4.1.2 states "conduct and pass a Dynamic Back-Pressure Test of the ARB certified Phase II vapor recovery system at least once every twelve months except for those aboveground storage tanks that have integral dispensers (non-remote), unless otherwise required under ARB Executive Order." All balance Phase II systems require integral dispensers (top or side mounted). The only balance system that allows a non-integral dispenser is Petro Vault (G-70-130-A) and the maximum distance of the dispenser from the base of the tank is 2 feet which is not considered a remote dispenser. Therefore, balance Phase II systems cannot have a remote dispenser and thus no Dynamic Back-Pressure Test is required for balance Phase II systems.

Section 6.4.1.3 states "for ARB certified Phase II vapor recovery systems with bellows-less nozzles, conduct and pass, as applicable, an Air-to-Liquid Volume Ratio Test or a Vapor-to-Liquid Ratio Test at least once every six months."

Section 6.4.1.4 states "for ARB certified Phase II vapor recovery systems with a liquid removal device required by ARB Executive Orders, conduct and pass a Liquid Removal Test whenever the liquid in the vapor path exceeds 100 ml of liquid. The amount of liquid in the vapor path shall be determined in accordance with the procedure specified in Section 5.3.5.4. "

Section 6.4.2 states "the person responsible for conducting the tests specified in Section 6.4 shall use calibrated equipment meeting the calibration range and calibration intervals specified by the manufacturer, ARB Executive Order, or ARB test procedure."

Section 6.4.3 states "until March 20, 2008, persons responsible for conducting the tests specified in Section 6.5 shall have completed a District-approved training program or the District's orientation class for testing and any subsequent required refresher class."

Section 6.4.4 states "effective on and after March 20, 2008, persons responsible for conducting the tests specified in Section 6.5 shall be in full

compliance with all provisions of Rule 1177 (Gasoline Dispensing Facility Tester Certification)."

Compliance with these requirements is assured by condition 16 on the proposed PTO C-311-227-1.

Section 6.4.5 states "each gasoline dispensing operation shall notify the District at least seven days prior to any performance testing."

Section 6.4.6 states "each ARB certified Phase II vapor recovery system shall be tested within 60 days of completion of installation or modification."

Section 6.5.1 states "tests shall be conducted in accordance with the latest version of the following ARB and EPA approved test methods, or their equivalents as approved by the EPA, and the APCO."

Section 6.5.1.2 states "Dynamic Back-Pressure Test, ARB TP-201.4"

Section 6.5.1.3 states "Air-to-Liquid Volume Ratio Test, ARB TP-201.5"

Section 6.5.1.4 states "Liquid Removal Test, ARB TP-201.6C"

Section 6.5.1.5 states "Static Leak Test for Aboveground Tanks, ARB TP-206.3 or TP-201.3B as applicable."

Compliance with these requirements is assured by conditions 14 and 15 on the proposed PTO C-311-227-1.

J. District 4623 - <u>Storage of Organic Liquids</u>

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

Each of the tanks in this project have a capacity greater than 1,100 gallons, so this rule is applicable to all the tanks in this project and the vapor control system that serves the tanks.

Per 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.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-142-2	1 through 9
C-311-143-2	1 through 9
C-311-151-2	1 through 7, 9, 10
C-311-180-2	1 through 7, 9, 10
C-311-181-2	1 through 7, 9, 10
C-311-182-2	1 through 7, 9, 10
C-311-194-2	1 through 7, 9, 10
C-311-215-2	1 through 7, 9, 10
C-311-216-2	1 through 7, 9, 10
C-311-217-2	1 through 7, 9, 10
C-311-219-2	1 through 7, 9, 10
C-311-220-2	1 through 7, 9, 10

Permit Unit(s)	Permit Condition(s)
C-311-221-2	1 through 7, 9, 10
C-311-222-5	1 through 7, 9, 10
C-311-223-3	1 through 7, 9, 10
C-311-226-2	1 through 7, 9, 10
C-311-229-1	1 through 7, 9, 10
C-311-230-1	1 through 7, 9, 10
C-311-231-1	1 through 7, 9, 10
C-311-232-1	1 through 7, 9, 10
C-311-233-1	1 through 7, 9, 10
C-311-234-1	1 through 7, 9, 10
C-311-237-2	9 through 17

Section 5.1 VOC Control System Requirements

Section 5.1.1 General VOC Control System Requirements
Except for small producers who are required to comply with the VOC control system requirements in Section 5.1.2, an operator shall not place, hold, or store organic liquid in any tank unless such tank is equipped with a VOC control system identified in Table 1. The specifications for the VOC control system are described in Sections 5.2, 5.3, 5.4, 5.5, and 5.6.

General VOC Control System Requirements			
Tank Capacity (gal)	TVP and Crude Oil Throughput		
	0.5 psia to <1.5 psia	1.5 psia to <11 psia	≥11.0 psia
(Group A) 1,100 to 19,800	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system
(Group B) >19,800 to 39,600	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system
(Group C) >39,600	Internal floating roof, or external floating roof, or vapor recovery system	Internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system

Each of the tanks in this project are connected to the vapor control system; therefore, the tanks satisfy the control requirements of Table 1.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-122-7	1, 3
C-311-123-7	1, 3
C-311-124-7	1, 3
C-311-125-7	1, 3
C-311-126-7	1, 3
C-311-127-7	1, 3
C-311-128-7	1, 3
C-311-129-9	1, 3
C-311-146-9	3, 5, 15
C-311-147-7	1, 3
C-311-150-7	1, 3
C-311-163-7	1, 3

Permit Unit(s)	Permit Condition(s)
C-311-164-7	1, 3
C-311-165-7	1, 3
C-311-166-7	1, 3
C-311-167-7	1, 3
C-311-168-7	1, 3
C-311-169-7	1, 3
C-311-170-7	1, 3
C-311-177-8	1, 3
C-311-196-7	1, 3
C-311-197-7	1, 3
C-311-198-7	1, 3

Section 5.1.3 requires all tanks subject to the control requirements of this rule to be maintained in a leak-free condition, except for the certain enumerated components on floating roof tanks and as allowed by Section 5.2 and applicable provisions of Table 3 through Table 5, and Section 5.7.5.4.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-122-7	2, 3
C-311-123-7	2, 3
C-311-124-7	2, 3
C-311-125-7	2, 3
C-311-126-7	2, 3
C-311-127-7	2, 3
C-311-128-7	2, 3
C-311-129-9	2, 3
C-311-146-9	14, 15
C-311-147-7	2, 3
C-311-150-7	2, 3
C-311-163-7	2, 3

Permit Unit(s)	Permit Condition(s)
C-311-164-7	2, 3
C-311-165-7	2, 3
C-311-166-7	2, 3
C-311-167-7	2, 3
C-311-168-7	2, 3
C-311-169-7	2, 3
C-311-170-7	2, 3
C-311-177-8	2, 3
C-311-196-7	2, 3
C-311-197-7	2, 3
C-311-198-7	2, 3

Section 5.2 Specifications for Pressure-Valve Setting

This section sets forth the requirements for tanks which satisfy the requirements of Section 5.1 above with the use of a pressure-vacuum relief valve. As shown above, both of the tanks included within this project satisfy the requirements of Section 5.1 above with the use of a vapor recovery system. Therefore, the pressure-vacuum valve setting requirements of this section are not applicable and no further discussion is required.

Section 5.3 Specifications for External Floating Roof Tanks

The tanks in this project are fixed roof tanks; therefore, this section is not applicable and no further discussion is required.

Section 5.4 Specifications for Internal Floating Roof Tanks

The tanks in this project are fixed roof tanks; therefore, this section is not applicable and no further discussion is required.

Section 5.5 Floating Roof Deck Requirements

The tanks in this project are fixed roof tanks; therefore, this section is not applicable and no further discussion is required.

Section 5.6 Specifications for Vapor Recovery Systems

Section 5.6.1 requires fixed roof tanks to be fully enclosed and maintained in a leak free condition. An APCO-approved vapor recovery system shall consist of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak free condition. The VOC control device shall be one of the following:

5.6.1.1 A condensation or vapor return system that connects to one of the following: a gas processing plant, a field gas pipeline, a pipeline distributing Public Utility Commission quality gas for sale, an injection well for disposal of vapors as approved by the California Department of Conservation, Division of Oil Gas, and Geothermal Resources (DOGGR), or

5.6.1.2 A VOC control device that reduces the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-122-7	1, 2
C-311-123-7	1, 2
C-311-124-7	1, 2
C-311-125-7	1, 2
C-311-126-7	1, 2
C-311-127-7	1, 2
C-311-128-7	1, 2
C-311-129-9	1, 2
C-311-146-9	3, 14
C-311-147-7	1, 2
C-311-150-7	1, 2
C-311-163-7	1, 2

Permit Unit(s)	Permit Condition(s)
C-311-164-7	1, 2
C-311-165-7	1, 2
C-311-166-7	1, 2
C-311-167-7	1, 2
C-311-168-7	1, 2
C-311-169-7	1, 2
C-311-170-7	1, 2
C-311-177-8	1, 2
C-311-196-7	1, 2
C-311-197-7	1, 2
C-311-198-7	1, 2
	1, 2

Section 5.6.2 requires any tank gauging or sampling device on a tank vented to the vapor recovery system to be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-122-7	4
C-311-123-7	4
C-311-124-7	4
C-311-125-7	4
C-311-126-7	4
C-311-127-7	4
C-311-128-7	4
C-311-129-9	4
C-311-146-9	16
C-311-147-7	4
C-311-150-7	4
C-311-163-7	4

Permit Unit(s)	Permit Condition(s)
C-311-164-7	4
C-311-165-7	4
C-311-166-7	4
C-311-167-7	4
C-311-168-7	4
C-311-169-7	4
C-311-170-7	4
C-311-177-8	4
C-311-196-7	4
C-311-197-7	4
C-311-198-7	4
	4

Section 5.6.3 requires all piping, valves, and fittings to be constructed and maintained in a leak free condition.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-122-7	2
C-311-123-7	2
C-311-124-7	2
C-311-125-7	2
C-311-126-7	2
C-311-127-7	2
C-311-128-7	2
C-311-129-9	2
C-311-146-9	14
C-311-147-7	2
C-311-150-7	2
C-311-163-7	2

Permit Unit(s)	Permit Condition(s)
C-311-164-7	2
C-311-165-7	2
C-311-166-7	2
C-311-167-7	2
C-311-168-7	2
C-311-169-7	2
C-311-170-7	2
C-311-177-8	2
C-311-196-7	2
C-311-197-7	2
C-311-198-7	2

Section 5.7 Voluntary Tank Preventive Inspection and Maintenance, and Tank Interior Cleaning Program

Chevron has requested that the voluntary tank-cleaning and inspection and maintenance provisions be included on these permits. Chevron has the ability to store various organic liquids in this tank, some of which have a true vapor pressure (TVP) of less than 0.5 psia. If the tank is storing organic liquids with a TVP of less than 0.5 psia, the voluntary tank cleaning and inspection and maintenance requirements of this rule are not applicable. Therefore, the following conditions were taken from District Policy SSP 2210, Organic Liquid Storage Tanks – Cleaning Requirements and will be included on all the ATC's in this project when a tank is storing an organic liquid with a TVP equal to or greater than 0.5 psia.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-122-7	19, 21 through 30
C-311-123-7	19, 21 through 30
C-311-124-7	19, 21 through 30
C-311-125-7	19, 21 through 30
C-311-126-7	19, 21 through 30
C-311-127-7	19, 21 through 30
C-311-128-7	19, 21 through 30
C-311-129-9	19, 21 through 30
C-311-146-9	38 through 48
C-311-147-7	19, 21 through 30
C-311-150-7	19, 21 through 30
C-311-163-7	19, 21 through 30

Permit Unit(s)	Permit Condition(s)
C-311-164-7	19, 21 through 30
C-311-165-7	19, 21 through 30
C-311-166-7	19, 21 through 30
C-311-167-7	19, 21 through 30
C-311-168-7	19, 21 through 30
C-311-169-7	19, 21 through 30
C-311-170-7	19, 21 through 30
C-311-177-8	19, 21 through 30
C-311-196-7	19, 21 through 30
C-311-197-7	19, 21 through 30
C-311-198-7	19, 21 through 30
	19, 21 through 30

Inspection and Maintenance

Chevron has proposed to follow the voluntary Inspection and Maintenance program outlined in the rule. Chevron has the ability to store various organic liquids in this tank, some of which have a true vapor pressure (TVP) of less than 0.5 psia. If the tank is storing organic liquids with a TVP of less than 0.5 psia, the voluntary tank cleaning and inspection and maintenance requirements of this rule are not applicable. Therefore, the following conditions, taken from draft District Policy SSP 2215, Organic Liquid Storage Tanks – Voluntary Inspection and Maintenance Program and will be included on each ATC in this project when a tank is storing an organic liquid with a TVP equal to or greater than 0.5 psia:

Permit Unit(s)	Permit Condition(s)
C-311-122-7	12 through 18
C-311-123-7	12 through 18
C-311-124-7	12 through 18
C-311-125-7	12 through 18
C-311-126-7	12 through 18
C-311-127-7	12 through 18
C-311-128-7	12 through 18
C-311-129-9	12 through 18
C-311-146-9	24 through 30
C-311-147-7	12 through 18
C-311-150-7	12 through 18
C-311-163-7	12 through 18

Permit Unit(s)	Permit Condition(s)
C-311-164-7	12 through 18
C-311-165-7	12 through 18
C-311-166-7	12 through 18
C-311-167-7	12 through 18
C-311-168-7	12 through 18
C-311-169-7	12 through 18
C-311-170-7	12 through 18
C-311-177-8	12 through 18
C-311-196-7	12 through 18
C-311-197-7	12 through 18
C-311-198-7	12 through 18

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Since Rule 4623, Table 3 does not explicitly state what records are required from the I&M conducted, nor is a recordkeeping condition specified in draft District Policy SSP 2215, Organic Liquid Storage Tanks – Voluntary Inspection and Maintenance Program, the following standard I&M recordkeeping condition found on most oil production tank permits.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-122-7	20
C-311-123-7	20
C-311-124-7	20
C-311-125-7	20
C-311-126-7	20
C-311-127-7	20
C-311-128-7	20
C-311-129-9	20
C-311-146-9	58
C-311-147-7	20
C-311-150-7	20
C-311-163-7	20

Permit Unit(s)	Permit Condition(s)
C-311-164-7	20
C-311-165-7	20
C-311-166-7	20
C-311-167-7	20
C-311-168-7	20
C-311-169-7	20
C-311-170-7	20
C-311-177-8	20
C-311-196-7	20
C-311-197-7	20
C-311-198-7	20

Section 6.2 TVP and API Gravity Testing of Stored Organic Liquids in Uncontrolled Fixed Roof Tanks

Section 6.2 concerns TVP and API gravity testing of stored organic liquids in uncontrolled fixed roof tanks. This section requires initial and periodic testing of the TVP and API gravity of the oil stored. The API gravity determines which TVP test method is appropriate. This section also allows for representative testing of the organic liquid in a tank battery provided the enumerated criteria are met.

Section 6.2.3 exempts tanks subject to the control requirements in Table 1 (Group A) or Table 2 (Group A and B) of this rule from the initial and periodic testing requirements. All the tanks in this project are connected to a vapor control system; therefore, the tanks are not subject to the testing requirements of this rule. However, since the applicant stores multiple liquids in this tank and the TVP of those liquids can fluxuate from having a TVP of less than 0.5 psia to having a TVP above 0.5 psia, Chevron is required to perform periodic TVP testing of the organic liquids stored in these tanks.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-122-7	5, 6
C-311-123-7	5, 6
C-311-124-7	5, 6
C-311-125-7	5, 6
C-311-126-7	5, 6
C-311-127-7	5, 6
C-311-128-7	5, 6
C-311-129-9	5, 6
C-311-146-9	17, 18
C-311-147-7	5, 6
C-311-150-7	5, 6
C-311-163-7	5, 6

Permit Unit(s)	Permit Condition(s)
C-311-164-7	5, 6
C-311-165-7	5, 6
C-311-166-7	5, 6
C-311-167-7	5, 6
C-311-168-7	5, 6
C-311-169-7	5, 6
C-311-170-7	5, 6
C-311-177-8	5, 6
C-311-196-7	5, 6
C-311-197-7	5, 6
C-311-198-7	5, 6

Section 6.3 Recordkeeping

This section requires an operator to retain accurate records required by this rule for a period of five years. Records must be made available to the APCO upon request, except for certain records that need to be submitted as specified in the respective sections (e.g. 6.3.6) below.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-122-7	20
C-311-123-7	20
C-311-124-7	20
C-311-125-7	20
C-311-126-7	20
C-311-127-7	20
C-311-128-7	20
C-311-129-9	20
C-311-146-9	58
C-311-147-7	20
C-311-150-7	20
C-311-163-7	20

Permit Unit(s)	Permit Condition(s)
C-311-164-7	20
C-311-165-7	20
C-311-166-7	20
C-311-167-7	20
C-311-168-7	20
C-311-169-7	20
C-311-170-7	20
C-311-177-8	20
C-311-196-7	20
C-311-197-7	20
C-311-198-7	20

Section 6.3.1 requires an operator whose tanks are subject to the requirements of this rule shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP and API gravity. These tanks are fixed roof tanks served by a vapor recovery system. Therefore, they would not typically be subject to the requirements of section 6.3.1. However, since Chevron stores organic liquids with TVP's below and above 0.5 psia, they are required to maintain these records in order to determine which liquids stored in this tank are form the Heavy Oil source.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-122-7	11
C-311-123-7	11
C-311-124-7	11
C-311-125-7	11
C-311-126-7	11
C-311-127-7	11
C-311-128-7	11
C-311-129-9	11
C-311-146-9	23
C-311-147-7	11
C-311-150-7	11
C-311-163-7	11

Permit Unit(s)	Permit Condition(s)
C-311-164-7	11
C-311-165-7	11
C-311-166-7	11
C-311-167-7	11
C-311-168-7	11
C-311-169-7	11
C-311-170-7	11
C-311-177-8	11
C-311-196-7	11
C-311-197-7	11
C-311-198-7	11

Section 6.4 Test Methods

The tanks in this project are subject to periodic API gravity or TVP testing requirements. In addition, the vapor recovery system is required to maintain a VOC control efficiency of at least 95%.

Compliance with the requirements of this rule is demonstrated with the permit conditions listed in the table below.

Permit Unit(s)	Permit Condition(s)
C-311-122-7	7 through 10
C-311-123-7	7 through 10
C-311-124-7	7 through 10
C-311-125-7	7 through 10
C-311-126-7	7 through 10
C-311-127-7	7 through 10
C-311-128-7	7 through 10
C-311-129-9	7 through 10
C-311-146-9	19 through 22
C-311-147-7	7 through 10
C-311-150-7	7 through 10
C-311-163-7	7 through 10

Permit Unit(s)	Permit Condition(s)
C-311-164-7	7 through 10
C-311-165-7	7 through 10
C-311-166-7	7 through 10
C-311-167-7	7 through 10
C-311-168-7	7 through 10
C-311-169-7	7 through 10
C-311-170-7	7 through 10
C-311-177-8	7 through 10
C-311-196-7	7 through 10
C-311-197-7	7 through 10
C-311-198-7	7 through 10

Section 7.2 Compliance Schedule

Any tank that is exempted under Section 4.0 that becomes subject to the VOC control system requirements of this rule through the loss of exemption status shall be in full compliance with this rule on the date the exemption status is lost.

K. District 4702 – Internal Combustion Engines – Phase 2

This analysis is based on the latest revision (August 18, 2011) which has not been SIP approved. However, this rule only impacts the emergency IC engine at this facility, and these requirements are identical to the latest SIP approved revision (January 18, 2007). The only change is Section 5.7 has been moved to Section 5.9. Therefore, compliance with this revision ensures compliance with the SIP approved January 18, 2007 revision. No further stringency analysis is required.

The purpose of this rule is to limit the emissions of nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines. This rule applies to any internal combustion engine with a rated brake horsepower greater than 50 horsepower.

Per Section 4.2 Except for the requirements of Section 5.7 and Section 6.2.3, the requirements of this rule shall not apply to:

- An emergency standby engine as defined in Section 3.0 of this rule, and provided that it is operated with a nonresettable elapsed operating time

meter. In lieu of a nonresettable time meter, the owner of an emergency engine may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO. The owner of the engine shall properly maintain and operate the time meter or alternative device in accordance with the manufacturer's instructions.

- An internal combustion engine that is operated no more than 200 hours per calendar year as determined by an operational nonresettable elapsed operating time meter and provided the engine is not used to perform any of the functions specified in Section 4.2.2.1 through Section 4.2.2.3 below. In lieu of a nonresettable time meter, the owner of an engine may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO. The owner of the engine shall properly maintain and operate the time meter or alternative device in accordance with the manufacturer's instructions.
  - To generate electrical power that is either fed into the electrical utility power grid or used to reduce electrical power purchased by a stationary source,
  - To generate mechanical power that is used to reduce electrical power purchased by a stationary source, or
  - In a distributed generation application.

a. <u>C-311-235-1 600 BHP CUMMINS MODEL KTA19C52 DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR</u>

Conditions 3, 7, 8, 9, and 11 of the permit requirements ensure compliance with this rule.

L. District 4703 - <u>Stationary Gas Turbines</u>

This rule applies to all stationary gas turbine systems, which are subject to District permitting requirements, and with ratings equal to or greater than 0.3 megawatt (MW) or a maximum heat input rating of more than 3,000,000 Btu per hour.

Section 5.1.2 requires the owner or operator to meet the applicable emission limits of Table 5-2, Tier 2 NO_X Compliance Limits.

Section 5.1.3 requires the owner or operator to meet the applicable emission limits of Table 5-3, Tier 3 NO_X Compliance Limits, by the compliance date in Section 7.3 of this rule. Per Section 7.3 the units at this facility are not required

to meet the requirements of this section till October 1, 2011 or within 90 days of a major overhaul whichever comes first.

Section 5.2 requires the owner or operator to meet 200 ppmvd CO @ 15% O_2.

Section 5.3 states that on or after the compliance due date the applicable emission limits will not be applicable during a transitional operational period. Section 3.33 defines the transitional operational period as any of the bypass transition period, primary re-ignition period, reduced load period, startup, or shutdown.

Section 6.1 requires that the owner or operator of any existing stationary gas turbine system, unless exempted in Section 6.1.5, shall submit, to the APCO for approval, an emissions control plan of all actions, including a schedule of increments of progress, which will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0. This has already been satisfied.

Section 6.2 requires the owner or operator, for the turbines with exhaust gas NOx control devices, to either install, operate, and maintain continuous emissions monitoring system (CEMS) for NO_X and O_2, or install and maintain one or more of the pre-approved alternate monitoring methods given in Sections 6.2.1.1 through 6.2.1.7. The facility has chosen to use a pre-approved alternate monitoring method.

Section 6.2.4 requires the owner or operator to maintain all records for a period of five year from the date of data entry and shall make such records available to the APCO upon request. Conditions will be included to satisfy compliance with this section.

Section 6.2.5 requires the owner or operator to submit information correlating the control system operating parameters to the associated NO_X output. This information may be used by the APCO to determine compliance when there is no continuous emission monitoring system for NO_X available or when the continuous emission monitoring system is not operating properly.

Section 6.2.6 requires the owner or operator to maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local start-up time and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used (liquid/gas).

Section 6.2.8 requires that the operator performing start-up or shutdown of a unit shall keep records of the duration of start-up or shutdown.

Section 6.3.1 requires that the owner or operator of any stationary gas turbine systems subject to the provisions of Section 5.0 of this rule shall provide source test information annually regarding the exhaust gas NO_X and CO concentrations. Section 6.3.3 requires the owner or operator of any unit with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off.

Section 6.4 identifies various test methods to measure NO_X, CO, O_2, HHV and LHV of gaseous fuels.

Section 7.3 requires that all owners or operators shall demonstrate and maintain compliance with the applicable provisions of Sections 5.0 and 6.0 in accordance with the compliance schedule in this section.

The facility received Authority to Construct (ATC) permits as specified in their emission control plan. Permit units C-311-13-8, -15-8, -88-8, 93-8, -95-8, and -97-8 will be in compliance when the ATCs are implemented. Therefore no changes were made to the permits.

M. 40 CFR 60 - <u>Subpart IIII, New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines</u>

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. 40 CFR Part 60, Subpart IIII is the only subpart that applies to compression-ignited internal combustion engines.

Section 60.4200(a)(2)(i) states that the provisions of this subpart apply to owners and operators of stationary compression ignition (CI) internal combustion engines that commence construction after July 11, 2005 where the engines are manufactured after April 1, 2006 and are not fire pump engines. The engine permit unit C-311-235 at this facility existed prior to these dates; therefore, this subpart does not apply to these permit units.

N. 40 CFR Part 63 - <u>Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines</u>

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes

requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

§ 63.6585 Applicability

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand. As such, the emergency engines at this facility (permit units '-19. '-20, '-43, '-49, '-50, and '-51) are subject to this subpart.

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

This facility is an area source of HAP emissions; therefore, this subpart applies.

- Existing stationary RICE

(iii) For stationary RICE located at an area source of HAP emissions, stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

The following permit unit is defined as "existing" since installation was prior to June 12, 2006: -235

(2) New stationary RICE

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;
(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;
(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;
(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;
(vi) Existing residential emergency stationary RICE located at an area source of HAP emissions;
(vii) Existing commercial emergency stationary RICE located at an area source of HAP emissions; or
(viii) Existing institutional emergency stationary RICE located at an area source of HAP emissions.

The existing emergency engines at this facility do not qualify for any of the exemptions listed in (3)(i) thru (3)(viii) above.

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;
(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;
(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;
(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

IIII.

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than October 19, 2013.

Permit units '-19, '-20, and '-49 are existing stationary CI RICE located at an area source of HAP emissions; therefore, the full compliance date for this subpart is May 3, 2013.

Permit units '-43, '-50, and '-51 are existing stationary SI RICE located at an area source of HAP emissions; therefore, the full compliance date for this subpart is October 19, 2013.

§ 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 1b and Table 2b to this subpart that apply to you. Note, there are no Table 1b or Table 2b operating limitations for emergency engines.

Table 2d to Subpart ZZZZ of Part 63 - Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions.

As stated in §§63.6603 and 63.6640, the following table applies to existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirements, except during periods of startup . . .	During periods of startup you must . . .
4. Emergency stationary CI RICE and black start stationary CI RICE.*	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;	N/A
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	N/A
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	N/A

*If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;
(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;
(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(f) *Requirements for emergency stationary RICE.*

(1) If you own or operate an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be

considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

(i) There is no time limit on the use of emergency stationary RICE in emergency situations.

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

(iii) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.

Table 6 to Subpart ZZZZ of Part 63 - Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
9. Existing emergency and black start stationary RICE located at an area source of HAP	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

§ 63.6645 What notifications must I submit and when?

There are no notifications necessary for existing emergency engines.

§ 63.6650 What reports must I submit and when?

There are no report submittals necessary for existing emergency engines.

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records as follows:

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.
(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE:

(2) An existing stationary emergency RICE.
(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraph (f)(2) below, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

§ 63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).
(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

Per the discussion above, the following conditions will be placed on the draft PTOs for permit units permit units '-19. '-20, '-43, '-49, '-50, and '-51 with the applicable date (May 3, 2013 for CI and October 19, 2013 for SI):

1. On and after May 3, 2013, the engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] - §63.6585/63.6595(a)

2. On and after May 3, 2013, the permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] - §63.6625(h)

3. On and after May 3, 2013, the engine's oil and filter shall be changed every 500 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] - §63.6603/63.6640 Table 2d, Row 4.a

4. On and after May 3, 2013, the engine's air filter shall be inspected every 1,000 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] - §63.6603/63.6640 Table 2d, Row 4.b

5. On and after May 3, 2013, the engine's hoses and belts shall be inspected every 500 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] - §63.6603/63.6640 Table 2d, Row 4.c

6. {modified 3404} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] - §63.6625(f)

7. {modified 4261} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ] - Table 6

8. {modified 3495} This engine shall be operated only for maintenance, testing, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per year.* [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] - §63.6640(f)(ii)

   *Different engines may have different hours due to ATCM requirements.

9. On and after May 3, 2013, the permittee shall maintain monthly records of all performance tests, opacity and visible emissions observations and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] - §63.6655(a)(3)/§63.10(b)(2)(viii) and §63.6655(a)(4)

10. On and after May 3, 2013, the permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] - §63.6655(a)(2) and (a)(5)

{modified 3873} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4702, 2520, 9.4, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] - §63.6660

O. 40 CFR Part 64 - Compliance Assurance Monitoring (CAM)

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. C-311-21-5, -25-4, -27-12, -28-14, -30-14, -36-13, -37-17, -27-24, -28-22, -29-38, -30-37, -31-36, -32-38, -33-41, -34-41, -35-33, -36-23, -38-18, -39-17, -40-16, -41-13, -42-12, -45-11, -52-12, -53-13, -76-10, and -84-10: Maximum Heat Input 62.5 MMBtu/hr Natural Gas-Fired Steam Generator with Low NO_X Burner and FGR

These permit units have emissions limits for SO_X, PM_{10}, CO, and VOC but they do not have add-on controls for these criteria pollutants. Therefore, these permit units are not subject to CAM for SO_X, PM_{10}, CO, and VOC.

These permits may be subject to CAM for NO_X, as there is a NO_X limit, and they do have add-on controls in the form of FGR. However, as shown below, the pre-control potential to emit is not greater than the major source threshold of 20,000 pounds NO_X/year. Therefore, these permit units are not subject to CAM

The control efficiency for FGR was determined using the following AP-42 emission factors from Table 1.4.1 (7/98) for small boilers < 100 MMBtu/hr.

	Emission Factor ($lb/10^6$ scf)
Uncontrolled	100
Controlled – low NOx burner	50
Controlled Low NOx burner and Flue Gas Recirculation	32

The control efficiency of FGR is,

$100 \times (50\ lb/10^6\ scf - 32\ lb/10^6\ scf) \div 50\ lb/10^6\ scf = 36\%$

The emission factor for these units is limited by Rule 4306 to 15 ppmv @ 3% O2 or 0.0182 lb-MMBtu/hr. The maximum rating for these units is 62.5 MMBtu/hr.

$$\text{Emission Factor}_{Precontrolled} = \text{Controlled EF}/(1 - \text{Control Efficiency})$$
$$= (0.0182\ lb\text{-}NO_X/MMBtu)/(1 - 0.36)$$
$$= 0.012\ lb\text{-}NO_X/MMBtu$$

$$PE_{Precontrolled} = \text{Heat Rating} \times \text{Emission Factor}_{Precontrolled} \times \text{Operating Schedule}$$
$$= 62.5\ MMBtu/hr \times 0.012\ lb\text{-}NO_X/MMBtu \times 8760\ hr/yr$$
$$= 6{,}570\ lb\text{-}NO_X/yr$$

b. <u>C-311-77-5, -78-3, -79-6, -83-4, -111-4, and -112-9: Thermally Enhanced Oil Recovery Operation With Well Vent Vapor Collection Piping</u>

These permit units are not subject to CAM since a vapor control system is a collection system rather than a control device.

c. <u>C-311-105-3, and -106-2: Closed-Vent Cyclic and Closed Vent Steam Dive Wells</u>

These permit units are not subject to CAM since a vapor control system is a collection system rather than a control device.

d. <u>C-311-122-7, -123-7, -124-7, -125-7, -126-7, -127-7, -128-7, -129-9, -146-9, -147-7, -150-7, -163-7, -164-7, -165-7, -166-7, -167-7, -168-7, -169-7, -170-7, -177-8, -196-7, -197-7, and -198-7: Fixed Roof Crude Oil Storage Tanks Served By Shared Vapor Recovery System</u>

These permit units are not subject to CAM since a vapor control system is a collection system rather than a control device.

e. C-311-205-2: Open-Vent Cyclic Wells

These permit units are not subject to CAM since a vapor control system is a collection system rather than a control device.

f. C-311-142-2, -143-2, -151-2, -180-2, -181-2, -194-2, -215-2, -216-2, -217-2, -219-2, -220-2, -221-2, -222-5, -223-3, -226-2, -229-1, -230-1, -231-1, -232-1, -233-1, -234-1, and -237-2 Fixed Roof Crude Oil Storage Tanks

These permit units are not subject to CAM since they are not equipped with any add-on controls.

g. C-311-227-1: One 2,000 Gallon Above Ground Storage Tank Served By Two-Point Phase I Vapor Recovery System And One Fueling Point With One Gasoline Dispensing Nozzle Served By Balance Phase Ii Vapor Recovery System (G-70-116-A)

This unit is not subject to CAM since it does not have an emissions limit.

h. C-311-235-1: 600 BHP CUMMINGS MODEL #KTA19C52 (SERIAL #31134968) DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

This unit is not subject to CAM since it does not have a control device.

i. 237-2 Fixed Roof Crude Oil Storage Tank with PV Valve

This unit is not subject to CAM since it does not have a control device that destroys emissions.

j. C-311-240-2: 600 BBL Pressure Vessel Vented To Teor Operation C-311-79

This unit is not subject to CAM since it does not have a control device.

IX. 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

1. Model General Permit Template SJV-UM-0-3

   By submitting Model General Permit Template SJV-UM-0-1 qualification form, the applicant has requested that a permit shield be granted for all the applicable requirements identified by the template. Therefore, the permit shields as granted in Model General Permit Template is included as conditions 38 and 39 of the facility-wide requirements (C-311-0-2).

2. Model General Permit Template SJV-IC-1-1

   The applicant does not propose to use any model general permit templates.

X. PERMIT CONDITIONS

See Attachment A - Draft Renewed Title V Operating Permit.

XI. ATTACHMENTS

A. Draft Renewed Title V Operating Permit
B. Previous Title V Operating Permit
C. Detailed Facility List
D. District Rule 4401 Stringency Analysis

ATTACHMENT A

Draft Renewed Title V Operating Permit

FACILITY: C-311-0-2 **EXPIRATION DATE:** 12/31/2005

DRAFT

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

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FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

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FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

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FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

42. Facility shall comply with all applicable requirements regarding preparation and implementation of a risk management plan (RMP) by August 31, 1999, and shall abide by all applicable sections of 40 CFR Part 68. [40 CFR Part 68] Federally Enforceable Through Title V Permit

43. On September 30, 2001, the initial Title V permit was issued. The reporting period of the Report of Required Monitoring and the Compliance Certification Report begin October 1 of every year, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days of the end of reporting period. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-13-8 **EXPIRATION DATE:** 12/31/2005

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SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-105, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-205, WITH A 36.4 MMBTU/HR COEN DUCT BURNER

PERMIT UNIT REQUIREMENTS

1. {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption by the cogeneration system (turbine and duct burner) shall not exceed 1,812,000 scf/day. Natural gas consumption by the cogeneration system shall not exceed 654 million scf/year. [District Rule 2201]
4. Emissions from the cogeneration system shall not exceed any of the following limits: 233.7 lb-NOx/day, 3.6 lb-SOx/day, 47.1 lb-PM10/day, 257.3 lb-CO/day, or 47.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration exceeding 35 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 and 4703, 5.1.2.1] Federally Enforceable Through Title V Permit
6. CO emissions from the cogeneration system with the duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb-CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. CO emissions from the cogeneration system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
8. Emissions from the cogeneration system (with or without duct burner firing) shall not exceed any of the following limits: 0.002 lb-SOx/MMBtu, 0.026 lb-PM10/MMBtu, or 0.026 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Reduced Load Period shall be defined as the time during which the gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate, not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit
10. Thermal Stabilization Period shall be defined as the startup or shutdown, as defined in 40 CFR 60.2, time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per startup or shutdown event. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) and the natural gas shall have a total sulfur content less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b) and District Rules 2201 and 4201] Federally Enforceable Through Title V Permit

12. The sulfur fuel content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377, or double GC for H2S and mercaptans. If the sulfur fuel content is less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every 6 months. If any six-month monitoring tests result in a sulfur fuel content exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

13. Performance testing shall be conducted annually to measure NOx and CO emissions concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The test will be comprised of three test runs performed at the highest physically achievable load of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, and 6.4] Federally Enforceable Through Title V Permit

14. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. Source testing shall not be required with the duct burner on if it has not been in operation during the previous 12 months, i.e. the duct burner need not be started to solely perform source testing. Source testing shall not be required with the duct burner off if it has been in continuous operation during the previous 12 months, i.e. the duct burner need not be shut-down solely to perform source testing. Source testing shall be performed within 60 days of startup or shutdown of the duct burner unless source testing of the duct burner has been performed in the previous 12 months. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

15. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

16. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in Rule 1081 (as amended 12/16/93), Sections 3.0 and 6.1. [District Rule1081] Federally Enforceable Through Title V Permit

17. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for approval 15 days prior to such testing. [District Rule 1081] Federally Enforceable Through Title V Permit

18. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall develop and keep on-site a parameter monitoring plan which includes the procedures used to document the proper operation of the NOx emissions controls (water injection). This plan shall include the parameter(s) monitored, such as the water-to-fuel ratio, and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturers recommendations and other relevant information shall be included in the monitoring plan. [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

21. The water to fuel ratio shall not be less than 0.45 on a weight basis. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

22. The owner or operator shall submit a semi-annual excess NOx emissions and monitor downtime report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by the 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water-to-fuel ratio, turbine load, nature and cause of excess emissions (if known), and corrective actions taken and preventative measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2)] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Excess emissions shall be defined as any operating hour for which the steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into the turbine shall also be considered as excess emissions. [40 CR 60.334(j)(1)(i)(A)] Federally Enforceable Through Title V Permit

24. Monitor downtime shall be any operating hour in which the water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit

25. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The cogeneration system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

30. {741} The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The owner or operator shall maintain a record of the cumulative rolling 12 month fuel usage for each turbine. The record shall be updated at the end of each calendar month. [District Rule 2201] Federally Enforceable Through Title V Permit

34. {787} Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

35. {2271} The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (a)(2), 60.333 (b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(b), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 1081(as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, 7.3 and Rule 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-15-8 **EXPIRATION DATE:** 12/31/2005

SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-106, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-206 WITH A 36.4 MMBTU/HR COEN DUCT BURNER

PERMIT UNIT REQUIREMENTS

1. {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption by the cogeneration system (turbine and duct burner) shall not exceed 1,812,000 scf/day. Natural gas consumption by the cogeneration system shall not exceed 654 million scf/year. [District Rule 2201]
4. Emissions from the cogeneration system shall not exceed any of the following limits: 233.7 lb-NOx/day, 3.6 lb-SOx/day, 47.1 lb-PM10/day, 257.3 lb-CO/day, or 47.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration exceeding 35 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 and 4703, 5.1.2.1] Federally Enforceable Through Title V Permit
6. CO emissions from the cogeneration system with the duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb-CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. CO emissions from the cogeneration system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
8. Emissions from the cogeneration system (with or without duct burner firing) shall not exceed any of the following limits: 0.002 lb-SOx/MMBtu, 0.026 lb-PM10/MMBtu, or 0.026 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Reduced Load Period shall be defined as the time during which the gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate, not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit
10. Thermal Stabilization Period shall be defined as the startup or shutdown, as defined in 40 CFR 60.2, time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per startup or shutdown event. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

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11. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) and the natural gas shall have a total sulfur content less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b) and District Rules 2201 and 4201] Federally Enforceable Through Title V Permit

12. The sulfur fuel content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377, or double GC for H2S and mercaptans. If the sulfur fuel content is less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every 6 months. If any six-month monitoring tests result in a sulfur fuel content exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

13. Performance testing shall be conducted annually to measure NOx and CO emissions concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The test will be comprised of three test runs performed at the highest physically achievable load of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, and 6.4] Federally Enforceable Through Title V Permit

14. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. Source testing shall not be required with the duct burner on if it has not been in operation during the previous 12 months, i.e. the duct burner need not be started to solely perform source testing. Source testing shall not be required with the duct burner off if it has been in continuous operation during the previous 12 months, i.e. the duct burner need not be shut-down solely to perform source testing. Source testing shall be performed within 60 days of startup or shutdown of the duct burner unless source testing of the duct burner has been performed in the previous 12 months. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

15. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

16. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in Rule 1081 (as amended 12/16/93), Sections 3.0 and 6.1. [District Rule1081] Federally Enforceable Through Title V Permit

17. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for approval 15 days prior to such testing. [District Rule 1081] Federally Enforceable Through Title V Permit

18. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall develop and keep on-site a parameter monitoring plan which includes the procedures used to document the proper operation of the NOx emissions controls (water injection). This plan shall include the parameter(s) monitored, such as the water-to-fuel ratio, and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturers recommendations and other relevant information shall be included in the monitoring plan. [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

21. The water to fuel ratio shall not be less than 0.45 on a weight basis. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

22. The owner or operator shall submit a semi-annual excess NOx emissions and monitor downtime report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by the 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water-to-fuel ratio, turbine load, nature and cause of excess emissions (if known), and corrective actions taken and preventative measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2)] Federally Enforceable Through Title V Permit

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23. Excess emissions shall be defined as any operating hour for which the steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into the turbine shall also be considered as excess emissions. [40 CR 60.334(j)(1)(i)(A)] Federally Enforceable Through Title V Permit

24. Monitor downtime shall be any operating hour in which the water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit

25. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The cogeneration system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

30. {741} The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The owner or operator shall maintain a record of the cumulative rolling 12 month fuel usage for each turbine. The record shall be updated at the end of each calendar month. [District Rule 2201] Federally Enforceable Through Title V Permit

34. {787} Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

35. {2271} The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (a)(2), 60.333 (b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(b), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 1081(as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, 7.3 and Rule 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-19-12 **EXPIRATION DATE:** 12/31/2005

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SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 13-03 THERMOTICS STEAM GENERATOR, MODEL 5G-50-NDS-15, WITH NORTH AMERICAN GAS BURNER, MODEL 6131G-LO-NOX WITH FLUE GAS RECIRCULATION AND O2 CONTROLLER.

PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit
4. This unit shall be fired on natural gas, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule]
5. Total gas consumption shall not exceed 1,404 MMBtu/day nor 457,800 MMBtu/year. [District NSR Rule]
6. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule]
7. The flue gas recirculation system shall be operated whenever the generator is in use. [District NSR Rule]
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3]
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1]
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2]
11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2]
12. NOx emissions shall not exceed 30 ppmvd @ 3% excess oxygen or 0.036 lb/MMBtu. [District Rule 2520, 9.3.2 and 4305]
13. CO emissions shall not exceed 50 ppmvd @ 3% excess oxygen or 0.037 lb/MMBtu. [District NSR Rule]

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

14. Emissions shall not exceed any of the following limits: 0.157 lb-SO2/MMBtu, 0.022 lb-PM10/MMBtu, 0.003 lb-VOC/MMBtu. [District NSR Rule]
15. This unit, or a representative unit as approved by the District, shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.3.2 and 4305]
16. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.3.2]
17. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.3.2]
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081]
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
20. NOx emissions (ppmv) shall be determined by EPA Method 7E or ARB Method 100; EPA Method 19 for NOx emissions rate (lb/MMBtu). [District Rule 2520, 9.3.2 and 4305]
21. CO emissions (ppmv) shall be determined by EPA Method 10 or ARB Method 100. [District Rule 2520, 9.3.2 and 4305]
22. Stack gas oxygen concentration shall be determined by EPA Method 3 or 3A, or CARB Method 100. [District Rule 2520, 9.3.2 and 4305]
23. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule]
24. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081]
25. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081]
26. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.3.2 and 4305]
27. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.3.2 and 4305]
28. If the NOx or CO concentrations,as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one(1) hour after detection. If portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emission test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.3.2 and 4305]
29. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 3 months prior to the date the stack concentration are measured and recorded. [District Rule 2520, 9.3.2 and 4305]
30. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.3.2 and 4305]
31. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.3.2 and 4305]

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.3.2 and 4305]

33. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule]

34. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule]

35. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2]

36. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2]

37. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1]

38. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.3.2, and 4305, 6.3.2]

39. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2]

40. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.3.2 and 4305, 6.3.2]

41. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2]

43. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081]

44. Permittee shall record daily total gas consumption. Records shall be made available for District inspection upon request. [District Rule 1070]

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

45. Copies of all , gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2]

46. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

47. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

48. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-20-14 **EXPIRATION DATE:** 12/31/2005

SECTION: 13D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR NATURAL GAS-FIRED STRUTHERS SG13-04 STEAM GENERATOR WITH A NORTH AMERICAN MODEL 6131G LOW-NOX BURNER WITH OXYGEN CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired on PUC-quality natural gas, or a blend of PUC-quality natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total gas consumption of this unit shall not exceed either of the following limits: 1,404 MMBtu/day or 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1, 4301, 5.1 and 5.2.3, and 4320, 5.4] Federally Enforceable Through Title V Permit
5. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801] Federally Enforceable Through Title V Permit
6. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; and 4305, 6.2.1] Federally Enforceable Through Title V Permit

11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Emissions from the steam generator shall not exceed any of the following limits: 0.157 lb-SOx/MMBtu, 0.004 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Except during start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 15 ppmvd NOx @ 3% O2, equivalent to 0.0182 lb-NOx/MMBtu or 50 ppmvd CO @ 3% O2, equivalent to 0.037 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

14. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

16. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

17. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 8,332 lb-NOx/yr, 51.9 lb-CO/day, or 16,939 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

18. The emission factor (EF) for SOx shall be determined and recorded on a monthly basis by using the following formula: EF = (A + B) x 2.857 / Total, where: A = (the amount (in MMscf) of well casing gas consumed for the month X the sulfur content (in grain/100 scf) as posted in the most recent lab analysis); B = (the amount (in MMscf) of PUC grade natural gas consumed for the month X 0.21; and Total = (the total amount of well casing and PUC grade gas combined consumed (in MMscf) for the month). [District NSR Rule] Federally Enforceable Through Title V Permit

19. 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 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

21. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, and 4306, 6.3.1] Federally Enforceable Through Title V Permit

23. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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24. 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 2520, 9.3.2, 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

25. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

26. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The source test plan shall indicate which test method shall be used to demonstrate compliance. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The results of each source test shall be submitted to the District within 60 days after the source test. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

29. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

30. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

31. 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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

32. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

33. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

34. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

35. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. When calculating NOx or CO emission limits based on heat input (lb/MMBtu), fuel hhv shall be certified by third party supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

37. The well casing gas shall be sampled monthly from the gas line down stream from the point where the casing gas from all 4 casing collection systems is connected together and upstream from the point where the well casing gas is fed to the steam generators. The gas sample shall be analyzed by the laboratory for total sulfur and the results shall be given in grain/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Permittee shall maintain monthly records of the total amount of well casing gas consumed by the entire bank of steam generators (in MMscf), along with the date and time of the measurement. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Permittee shall maintain monthly records of the total amount of PUC grade gas consumed by the entire bank of steam generators (in MMscf), along with the date and time of the measurement. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. Permittee shall maintain records of daily total gas consumption. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

41. Permittee shall maintain records of all lab analyses. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

42. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

44. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

45. 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, 2520, 9.4.2, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

46. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.3] Federally Enforceable Through Title V Permit

47. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1081 (Amended December 16, 1993), 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

48. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-21-5 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14

EQUIPMENT DESCRIPTION:
58.5 MBTU/HR SG 13-5 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE LOW-NOX BURNER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
3. This unit shall only be fired natural gas and/or well casing gas. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Total gas consumption shall not exceed either of the following limits: 1,404 MMBtu/day or 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; and 4305, 6.2.1] Federally Enforceable Through Title V Permit
9. Emissions from the steam generator shall not exceed any of the following limits: 0.157 lb-SOx/MMBtu, 0.08 lb-PM10/MMBtu, or 0.08 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

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10. Except during start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 15 ppmvd NOx @ 3% O2, equivalent to 0.0182 lb-NOx/MMBtu or 50 ppmvd CO @ 3% O2, equivalent to 0.037 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

11. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 14,940 lb-NOx/yr, 51.9 lb-CO/day, or 16,939 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of each start-up and shutdown period. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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 and 4306] Federally Enforceable Through Title V Permit

17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. 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

19. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. Permittee shall record daily natural gas and well casing gas consumption. [District NSR Rule] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

31. 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, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

32. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

33. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

34. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-22-11 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 13-06 THERMOTICS STEAM GENERATOR, MODEL 5G-50-NDS-15, WITH A NORTH AMERICAN GAS BURNER, MODEL 6131G-CR-67.5 WITH FLUE GAS RECIRCULATION AND O2 CONTROLLER DESIGNATE AS DORMANT EMISSION UNIT(DEU)

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PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit
2. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072 ,D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
18. Total gas consumption shall not exceed 1404 MMBtu/day nor 457800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Permittee shall record daily total gas consumption. Records shall be made available for District inspection upon request. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
20. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
21. This unit shall be fired with natural gas or casing gas. [District NSR Rule] Federally Enforceable Through Title V Permit
22. The flue gas recirculation system shall be operated whenever the generator is in use. [District NSR Rule] Federally Enforceable Through Title V Permit
23. NOx emissions shall not exceed 30 ppmvd @ 3% excess oxygen or 0.036 lb/MMBtu. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit
24. CO emissions shall not exceed 50 ppmvd @ 3% excess oxygen or 0.037 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
25. Emissions shall not exceed the following limits: 0.157 lb-SO2/MMBtu, 0.022 lb-PM10/MMBtu, 0.003 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. This unit, or a representative unit as approved by the District, shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

28. 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

29. NOx emissions (ppmv) shall be determined by EPA Method 7E or ARB Method 100; EPA Method 19 for NOx emissions rate (lb/MMBtu). [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. CO emissions (ppmv) shall be determined by EPA Method 10 or ARB Method 100. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. Stack gas oxygen concentration shall be determined by EPA Method 3 or 3A, or CARB Method 100. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

33. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081] Federally Enforceable Through Title V Permit

34. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

35. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

36. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

37. If the NOx or CO concentrations,as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one(1) hour after detection. If portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emission test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

38. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentration are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

39. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

40. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

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41. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

42. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

44. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

45. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

46. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

47. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

48. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

49. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

50. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-23-10 **EXPIRATION DATE:** 12/31/2005

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SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 13-07 THERMOTICS STEAM GENERATOR, MODEL 5G-50-NDS-15, WITH A NORTH AMERICAN GAS BURNER, MODEL 6131G-CR-67.5 WITH FLUE GAS RECIRCULATION AND O2 CONTROLLER DESIGNATE AS DORMANT EMISSION UNIT(DEU)

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit
2. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. Total gas consumption shall not exceed 1404 MMBtu/day nor 457800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit

19. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Permittee shall record daily total gas consumption. Records shall be made available for District inspection upon request. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. This unit shall be fired with natural gas and casing gas. [District NSR Rule] Federally Enforceable Through Title V Permit

22. The flue gas recirculation system or the fuel induced recirculation system shall be operated whenever the generator is in use. [District NSR Rule] Federally Enforceable Through Title V Permit

23. NOx emissions shall not exceed 30 ppmvd @ 3% excess oxygen or 0.036 lb/MMBtu. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

24. CO emissions shall not exceed 50 ppmv @ 3% excess oxygen or 0.037 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

25. Emissions shall not exceed the following limits: 0.157 lb-SO2/MMBtu, 0.022 lb-PM10/MMBtu, 0.003 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. This unit, or a representative unit as approved by the District, shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

28. 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

29. NOx emissions (ppmv) shall be determined by EPA Method 7E or ARB Method 100; EPA Method 19 for NOx emissions rate (lb/MMBtu). [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. CO emissions (ppmv) shall be determined by EPA Method 10 or ARB Method 100. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. Stack gas oxygen concentration shall be determined by EPA Method 3 or 3A, or CARB Method 100. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

33. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081] Federally Enforceable Through Title V Permit

34. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

35. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 1 day of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

36. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

37. If the NOx or CO concentrations,as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one(1) hour after detection. If portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emission test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

38. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentration are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

39. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

40. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

42. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

44. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

45. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

46. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

47. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

48. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

49. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

50. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-25-4 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 13-9 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN FLUE GAS RECIRCULATION SYSTEM.

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PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
3. This unit shall be fueled with natural gas, LPG, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District Rule 2201] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; and 4305, 6.2.1] Federally Enforceable Through Title V Permit
8. Natural gas consumption shall not exceed either of the following limits: 1,404 million MMBtu/day or 434,700 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. LPG consumption shall not exceed either of the following limits: 1,404 MMBtu/day or 435,000 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Emissions from the steam generator shall not exceed any of the following limits: 0.052 lb-SOx/MMBtu, 0.045 lb-PM10/MMBtu, or 0.009 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Except during start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 15 ppmvd NOx @ 3% O2, equivalent to 0.0182 lb-NOx/MMBtu or 50 ppmvd CO @ 3% O2, equivalent to 0.037 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

12. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2202] Federally Enforceable Through Title V Permit

13. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 15,660 lb-NOx/yr, 51.9 lb-CO/day, or 16,084 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of each start-up and shutdown period. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

15. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

16. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. 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

20. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. 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

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. Permittee shall record daily natural gas, propane, and well casing gas consumption. [District NSR Rule] Federally Enforceable Through Title V Permit

31. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

32. 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, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

33. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

34. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

35. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-27-12 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #13-11, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN BURNER, MODEL 6131G-CR-62.5, EQUIPPED WITH FLUE GAS RECIRCULATION AND AN OXYGEN CONTROLLER.

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired exclusively with natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Natural gas consumption shall not exceed 1,404 MMBtu/day nor 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in the fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
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 NSR Rule] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.0 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
6. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit
7. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
8. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 5.3, and 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. Emissions from this unit shall not exceed any of the following limits: 0.001 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
11. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 5.85 lb-NOx/hr, 0.06 lb-SOx/hr, 0.29 lb-PM10/hr, 4.91 lb-CO/hr, or 0.18 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305,6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

15. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

16. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

17. 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, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

19. 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

20. 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, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

25. 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, 5.4.2 and 5.5.4, and 4306, 5.4.2 and 5.5.4] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

27. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 4306, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

32. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

34. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

36. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

37. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit

38. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for natural gas used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. Records of daily natural gas fuel consumption shall be maintained and made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

42. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

43. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

45. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

46. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

47. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-28-14 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #13-12, MODEL OH-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GAS AND OIL BURNER, MODEL 6131G-CR-62.5, FLUE GAS RECIRCULATION (FGR), AND AN OXYGEN CONTROLLER.

PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Natural gas consumption shall not exceed 1,404 MMBtu/day nor 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in the fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit
6. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. Emissions from this unit shall not exceed any of the following limits: 0.284 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, or 0.008 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
10. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 5.85 lb-NOx/hr, 16.61 lb-SOx/hr, 0.29 lb-PM10/hr, 4.91 lb-CO/hr, or 0.47 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit
12. 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
13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
14. Sampling facilities for source testing shall be provided in accordance with the provisions of rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
15. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
17. 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, 5.2.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
19. 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
20. 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, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

25. 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, 5.4.2 and 4306, 5.4.2 and 5.5.4] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

32. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

34. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

36. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

37. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Permittee shall record daily natural gas consumption. Records shall be made available for District inspection upon request. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for natural gas used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

41. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

45. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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46. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-30-14 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #13-14, MODEL OH-50-ND-16XAM, NATURAL GAS FIRED, WITH A NORTH AMERICAN BURNER, MODEL 613G-CR-62.5, AN OXYGEN CONTROLLER, AND A FLUE GAS RECIRCULATION (FGR) SYSTEM.

PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. 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 NSR Rule] Federally Enforceable Through Title V Permit
3. Natural gas consumption shall not exceed 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in the fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
6. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit
7. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
8. Emissions from this unit shall not exceed any of the following limits: 0.14 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu [District NSR Rule] Federally Enforceable Through Title V Permit
9. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.37 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
10. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 6.25 lb-NOx/hr, 8.75 lb-SOx/hr, 0.31 lb-PM10/hr, 5.25 lb-CO/hr, or 0.19 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 5.3, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1and 4306, 5.5.1] Federally Enforceable Through Title V Permit

15. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

17. 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, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

19. 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

20. 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, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

25. 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, 5.4.2 and 4306, 5.5.2 and 5.5.4] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

32. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

34. Permittee shall maintain accurate annual records of natural gas use, and such records shall be made readily available. [District Rule 1070] Federally Enforceable Through Title V Permit

35. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for natural gas used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

38. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

39. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

40. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

41. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-36-13 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
5 MMBTU/HR STRUTHERS THERMOFLOOD MODEL OH-50-ND-16XAM NATURAL GAS/LPG/WELL CASING GAS/TANK VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (SG #25-15) WITH A NORTH AMERICAN MODEL MAGNA-FLAME GLE LOW NOX BURNER SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS FROM SECTIONS 25D AND 6C ONLY

PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas, LPG, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. 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 NSR Rule] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. Total LPG, casing gas, waste gas, and natural gas consumption shall not exceed 435,000 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
6. The permittee shall maintain and operate a non-resettable, totalizing mass or volumetric flow meter in the fuel line to the steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Scrubber liquor pH shall be maintained between 6.5 and 8.0. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Tray packing flowrate shall be operated at 700 to 840 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Quench flowrate shall be operated at 145 to 185 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520] Federally Enforceable Through Title V Permit

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12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, and 4351] Federally Enforceable Through Title V Permit

15. Except during start-up and shutdown periods, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.052 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.0085 lb-VOC/MMBtu. [District Rules 2201, 4301, 4305, and 4306] Federally Enforceable Through Title V Permit

16. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. the operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306] Federally Enforceable Through Title V Permit

19. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 7,830 lb-NOx/year, 49.1 lb-CO/day, or 16,095 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. 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

28. 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

29. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

34. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

35. Permittee shall record natural gas, propane, casing gas, and waste gas consumption. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. Permittee shall measure and record the BTU content of the gas burned at the time of NOx testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4801] Federally Enforceable Through Title V Permit

37. Permittee shall maintain with the permit a current listing of all TEOR and TVR systems providing vapor to this steam generator and shall make such listing readily available for District inspection upon request [District NSR Rule] Federally Enforceable Through Title V Permit

38. Permittee shall maintain daily records of volume of fuel gas burned, TEOR/TVR gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

39. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

40. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

41. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

42. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

43. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

44. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

45. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-37-17 **EXPIRATION DATE:** 12/31/2005

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SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR STRUTHERS THERMOFLOOD MODEL OH-50-ND-16XAM STEAM GENERATOR (#25-16) WITH A NORTH AMERICAN MODEL GLE LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS

PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas, LPG, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. 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 NSR Rule] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 4201, 3.1 and 4301, 5.1and 5.2] Federally Enforceable Through Title V Permit
4. Total gas consumption shall not exceed 1,404 MMBtu/day nor 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
6. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Scrubber liquor pH shall be maintained between 6.5 and 8.0. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Tray packing flowrate shall be operated at 700 to 840 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Quench flowrate shall be operated at 145 to 185 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1, 4306, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Except during start-up and shutdown periods, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.052 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.008 lb-VOC/MMBtu. [District Rules 2201, 4301, 4305, and 4306] Federally Enforceable Through Title V Permit

15. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. the operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

18. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 8,240 lb-NOx/year, 85.6 lb-CO/day, or 16,939 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

21. 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, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

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22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

23. 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, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

26. 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

27. 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, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

29. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

30. 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, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

31. 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

32. Sampling facilities for source testing shall be provided in accordance with the provisions of rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

33. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Waste gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

34. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

35. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Permittee shall record daily total gas consumption. Records shall be retained for at least five years and made available for District inspection upon request. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

37. Daily records of the tray packing flowrate and the quench flowrate shall be maintained, retained on the premises for a period of at least five years, and made available for District inspection upon request. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

38. Permittee shall measure and record the BTU content of the gas burned at the time of NOx source testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4801] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Permittee shall maintain with the permit a current listing of all TEOR and TVR systems providing vapor to this steam generator and shall make such listing readily available for District inspection upon request [District NSR Rule] Federally Enforceable Through Title V Permit

41. Permittee shall maintain daily records of volume of fuel gas burned, TEOR/TVR gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

42. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

43. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

45. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

46. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

47. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

48. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-38-18 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-17 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE LOW-NOX BURNER (OR DISTRICT APPROVED EQUIVALENT) AND FLUE GAS RECIRCULATION SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS

PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas, LPG, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total gas consumption of this unit shall not exceed either of the following limits: 1,404 MMBtu/day or 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Scrubber liquor pH shall be maintained between 6.5 and 8.0. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Tray packing flowrate shall be operated at 700 to 840 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Quench flowrate shall be operated at 145 to 185 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
10. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

15. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Emissions from the steam generator shall not exceed any of the following limits: 0.052 lb-SOx/MMBtu, 0.045 lb-PM10/MMBtu, or 0.008 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Except during start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 15 ppmvd NOx @ 3% O2, equivalent to 0.0182 lb-NOx/MMBtu or 50 ppmvd CO @ 3% O2, equivalent to 0.037 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

18. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

20. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

21. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 8,332 lb-NOx/yr, 51.9 lb-CO/day, or 16,939 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, and 4306, 6.3.1] Federally Enforceable Through Title V Permit

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23. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. 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 2520, 9.3.2, 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

25. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

26. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The source test plan shall indicate which test method shall be used to demonstrate compliance. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The results of each source test shall be submitted to the District within 60 days after the source test. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

29. 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 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

30. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100 [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

31. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

32. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

33. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

34. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

35. 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 Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

37. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

38. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

39. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

40. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Waste gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

41. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

42. Permittee shall maintain records of daily total gas consumption. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

43. Permittee shall maintain daily records of the tray packing flowrate and the quench flowrate. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

44. Permittee shall measure and record the BTU content of the gas burned at the time of NOx source testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4801] Federally Enforceable Through Title V Permit

45. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

46. Permittee shall maintain with the permit a current listing of all TEOR and TVR systems providing vapor to this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

47. Permittee shall maintain daily records of volume of fuel gas burned, TEOR/TVR gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

48. 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, 2520, 9.4.2, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

49. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

50. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

51. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

52. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

53. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-39-17 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #25-18, MODEL OH-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GAS AND OIL BURNER AND FLUE GAS RECIRCULATION SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS.

PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas, LPG, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total gas consumption shall not exceed 1,404 MMBtu/day nor 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Scrubber liquor pH shall be maintained between 6.5 and 8.0. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Tray packing flowrate shall be operated at 700 to 840 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Quench flowrate shall be operated at 145 to 185 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 5.3, and 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Emissions from this unit shall not exceed any of the following limits: 0.0520 lb-SOx/MMBtu, 0.045 lb-PM10/MMBtu, or 0.008 lb-VOC/MMBtu. [District NSR Rule]
11. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306]
12. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 5.85 lb-NOx/hr, 3.04 lb-SOx/hr, 2.63 lb-PM10/hr, 4.91 lb-CO/hr, or 0.47 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

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

13. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit

14. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

16. 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

17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

18. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

20. Sampling facilities for source testing shall be provided in accordance with the provisions of rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

21. 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, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

22. 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, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

23. 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

24. 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, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2.4] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

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28. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306, 5.5.4] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306, 6.1] Federally Enforceable Through Title V Permit

31. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

32. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2, 4305, 6.2.1, 4306, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Waste gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

39. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

40. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

41. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit

43. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

44. Permittee shall record daily total gas consumption. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

45. Daily records of the tray packing flowrate and the quench flowrate shall be maintained, retained on the premises for a period of at least five years, and made available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

46. Permittee shall measure and record the BTU content of the gas burned at the time of NOx source testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and District Rule 4801] Federally Enforceable Through Title V Permit

47. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

48. Permittee shall maintain with the permit a current listing of all TEOR and TVR systems providing vapor to this steam generator and shall make such listing readily available for District inspection upon request [District NSR Rule] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

49. Permittee shall maintain daily records of volume of fuel gas burned, TEOR/TVR gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

50. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

51. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

52. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

53. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

54. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

55. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-40-16 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR NATURAL GAS, LPG OR PROCESS GAS FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION SYSTEM, AN OXYGEN CONTROLLER, SERVED BY THE NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS (COMMON TO C-311-37) (SG-25-19)

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PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas, LPG, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Fuel consumption shall not exceed 434,700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
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 NSR Rule] Federally Enforceable Through Title V Permit
4. The permittee shall maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule]
6. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. Emissions from this unit shall not exceed any of the following limits: 0.052 lb-SOx/MMBtu, 0.045 lb-PM10/MMBtu, or 0.0055 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
10. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 5.85 lb-NOx/hr, 3.04 lb-SOx/hr, 2.63 lb-PM10/hr, 4.91 lb-CO/hr, or 0.32 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

13. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305,5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

16. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

17. 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, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

19. 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

20. 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, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

25. 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, 5.4.2 and 4306, 5.4.2 and 5.5.4] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

29. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

30. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

33. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

34. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4306, 6.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

36. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit

37. Copies of all gas purchase contracts, supplier certifications, and test results (including fuel hhv) to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

39. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

40. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

41. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

42. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-41-13 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-20 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE BURNER AND FLUE GAS RECIRCULATION SYSTEM, SERVED BY THE NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS

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PERMIT UNIT REQUIREMENTS

1. Total LPG, casing gas, waste gas, and natural gas consumption shall not exceed 435,000 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule]
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 NSR Rule] Federally Enforceable Through Title V Permit
4. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Emissions from this unit shall not exceed any of the following limits: 0.052 lb-SOx/MMBtu, 0.044 lb-PM10/MMBtu, or 0.0085 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
7. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 5.85 lb-NOx/hr, 3.04 lb-SOx/hr, 2.57 lb-PM10/hr, 4.91 lb-CO/hr, or 0.50 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit
9. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
10. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. 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

13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

14. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] 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 and 4306, 5.5.2] 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 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

17. 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

18. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306, 6.2.2] Federally Enforceable Through Title V Permit

19. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306, 6.2.3] Federally Enforceable Through Title V Permit

20. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2.4] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

26. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

27. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

28. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

29. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

31. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

32. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

33. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

34. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

35. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. Copies of all gas purchase contracts, supplier certifications, and test results (including fuel hhv) to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

37. Permittee shall record natural gas, propane, casing gas and waste gas consumption. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. Permittee shall measure and record the BTU content of the gas burned at the time of NOx testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and District Rule 4801] Federally Enforceable Through Title V Permit

39. Permittee shall maintain with the permit a current listing of all TEOR and TVR systems providing vapor to this steam generator and shall make such listing readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Permittee shall maintain daily records of volume of fuel gas burned, TEOR/TVR gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

41. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

45. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

46. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-42-12 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-21 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION SYSTEM

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PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
3. This unit shall be fired exclusively with natural gas or LPG. [District Rule 2201] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; and 4305, 6.2.1] Federally Enforceable Through Title V Permit
8. Natural gas or LPG consumption shall not exceed either of the following limits: 1,404 MMBtu/day or 434,700 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions from the steam generator shall not exceed any of the following limits: 0.052 lb-SOx/MMBtu, 0.045 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Except during start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 15 ppmvd NOx @ 3% O2, equivalent to 0.0182 lb-NOx/MMBtu or 50 ppmvd CO @ 3% O2, equivalent to 0.037 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

11. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 15,649 lb-NOx/yr, 51.9 lb-CO/day, or 16,084 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of each start-up and shutdown period. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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 and 4306] Federally Enforceable Through Title V Permit

17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. 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

19. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. Permittee shall record daily natural gas and propane consumption. [District NSR Rule] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

31. 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, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

34. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

35. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

36. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

37. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-43-11 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-22 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16AXM, WITH A NORTH AMERICAN 4131-6-LNX BURNER WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit
2. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. 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 NSR Rule] Federally Enforceable Through Title V Permit

19. The flue gas recirculation system shall be operated in accordance with the manufacturer's directions whenever the steam generator is operating. [District NSR Rule] Federally Enforceable Through Title V Permit

20. This unit shall be fired exclusively with natural gas or LPG. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Natural gas or LPG consumption shall not exceed 1404 MMBtu/day nor 434,700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit

22. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Emissions shall not exceed any of the following limits: NOx - 0.036 lb/MMBtu, SOx - 0.052 lb/MMBtu, CO - 0.035 lb/MMBtu, and PM-10 - 0.045 lb/MMBtu. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit

24. Emissions shall not exceed any of the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, CO - 49.0 lb/day, and PM10 - 63.12 lb/day. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit

25. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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26. 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

27. 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

28. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. If the NOx or CO concentrations, as measured by the portable emissions analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentrations are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

33. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

34. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. Permittee shall record daily natural gas and propane consumption. Records shall be provided to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

36. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source; or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

38. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. Source testing shall be performed for NOx (ppmv) according to EPA method 7E (or ARB Method 100) and EPA Method 10 (or ARB Method 100) for CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

43. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-45-11 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-24 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16AXM, WITH A NORTH AMERICAN GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION SYSTEM

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PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
3. This unit shall be fired exclusively with natural gas or LPG. [District Rule 2201] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; and 4305, 6.2.1] Federally Enforceable Through Title V Permit
8. Natural gas or LPG consumption shall not exceed either of the following limits: 1,404 MMBtu/day or 434,700 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions from the steam generator shall not exceed any of the following limits: 0.052 lb-SOx/MMBtu, 0.045 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Except during start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 15 ppmvd NOx @ 3% O2, equivalent to 0.0182 lb-NOx/MMBtu or 50 ppmvd CO @ 3% O2, equivalent to 0.037 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

11. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 15,649 lb-NOx/yr, 51.9 lb-CO/day, or 16,084 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of each start-up and shutdown period. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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 and 4306] Federally Enforceable Through Title V Permit

17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. 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

19. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. Permittee shall record daily natural gas and propane consumption. [District NSR Rule] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

31. 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, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

34. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

35. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

36. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

37. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-46-10 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-25 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN 4131-G-LNX BURNER WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit
2. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. 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 NSR Rule] Federally Enforceable Through Title V Permit

19. The flue gas recirculation system shall be operated in accordance with the manufacturer's directions whenever the steam generator is operating. [District NSR Rule] Federally Enforceable Through Title V Permit

20. This unit shall be fired exclusively with natural gas or LPG. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Natural gas or LPG consumption shall not exceed 1404 MMBtu/day nor 434,700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit

22. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Emissions shall not exceed any of the following limits: NOx - 0.036 lb/MMBtu, SOx - 0.052 lb/MMBtu, CO - 0.035 lb/MMBtu, and PM-10 - 0.045 lb/MMBtu. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit

24. Emissions shall not exceed any of the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, CO - 49.0 lb/day, and PM10 - 63.12 lb/day. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit

25. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. 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

27. 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

28. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. If the NOx or CO concentrations, as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentrations are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

33. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

34. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. Permittee shall record daily natural gas and propane consumption. Records shall be provided to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

36. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source; or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

38. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. Source testing shall be performed for NOx (ppmv) according to EPA method 7E (or ARB Method 100) and EPA Method 10 (or ARB Method 100) for CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

43. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-47-4 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-26 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16-XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131-G-LNX, AND A FLUE GAS RECIRCULATION SYSTEM.

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PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. Natural gas consumption shall not exceed 1.34 million scf/day or 414 million scf/year. [District Rule 2201]
8. This unit shall be fired exclusively with natural gas or LPG. [District Rule 2201]
9. LPG consumption shall not exceed 1,404 MMBtu/day nor 435,000 MMBtu/year. [District Rule 2201]
10. The flue gas recirculation system shall be operated whenever the generator is in use. [District Rule 2201]
11. Emissions shall not exceed the following limits: CO - 0.034 lb/MMBtu, SOx - 0.052 lb/MMBtu, or PM-10 - 0.045 lb/MMBtu. [District Rule 2201]
12. Emissions shall not exceed the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, or PM10 - 63.12 lb/day. [District Rule 2201]
13. Permittee shall record natural gas and propane consumption. Records shall be retained for at least two years and provided to the District upon request. [District Rule 1070]
14. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. [District Rule 4305]
15. {109} 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]
16. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-48-4 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-27 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131, AND A FLUE GAS RECIRCULATION SYSTEM.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. Natural gas consumption shall not exceed 1.34 million scf/day or 414 million scf/year. [District Rule 2201]
8. This unit shall be fired exclusively with natural gas or LPG. [District Rule 2201]
9. LPG consumption shall not exceed 1,404 MMBtu/day nor 435,000 MMBtu/year. [District Rule 2201]
10. The flue gas recirculation system shall be operated whenever the generator is in use. [District Rule 2201]
11. Emissions shall not exceed the following limits: CO - 0.034 lb/MMBtu, SOx - 0.052 lb/MMBtu, or PM-10 - 0.045 lb/MMBtu. [District Rule 2201]
12. Emissions shall not exceed the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, or PM10 - 63.12 lb/day. [District Rule 2201]
13. Permittee shall record natural gas and propane consumption. Records shall be retained for at least two years and provided to the District upon request. [District Rule 1070]
14. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. [District Rule 4305]
15. {109} 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]
16. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-49-4 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-28 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131-G-LNX, AND A FLUE GAS RECIRCULATION SYSTEM.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. Natural gas consumption shall not exceed 1.34 million scf/day or 414 million scf/year. [District Rule 2201]
8. This unit shall be fired exclusively with natural gas or LPG. [District Rule 2201]
9. LPG consumption shall not exceed 1,404 MMBtu/day nor 435,000 MMBtu/year. [District Rule 2201]
10. The flue gas recirculation system shall be operated whenever the generator is in use. [District Rule 2201]
11. Emissions shall not exceed the following limits: CO - 0.034 lb/MMBtu, SOx - 0.052 lb/MMBtu, or PM-10 - 0.045 lb/MMBtu. [District Rule 2201]
12. Emissions shall not exceed the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, or PM10 - 63.12 lb/day. [District Rule 2201]
13. Permittee shall record natural gas and propane consumption. Records shall be retained for at least two years and provided to the District upon request. [District Rule 1070]
14. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. [District Rule 4305]
15. {109} 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]
16. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-50-4 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-29 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-DN-16XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131-G-LNX, AND A GAS RECIRCULATION SYSTEM.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. Natural gas consumption shall not exceed 1.34 million scf/day or 414 million scf/year. [District Rule 2201]
8. This unit shall be fired exclusively with natural gas or LPG. [District Rule 2201]
9. LPG consumption shall not exceed 1,404 MMBtu/day nor 435,000 MMBtu/year. [District Rule 2201]
10. The flue gas recirculation system shall be operated whenever the generator is in use. [District Rule 2201]
11. Emissions shall not exceed the following limits: CO - 0.034 lb/MMBtu, SOx - 0.052 lb/MMBtu, or PM-10 - 0.045 lb/MMBtu. [District Rule 2201]
12. Emissions shall not exceed the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, or PM10 - 63.12 lb/day. [District Rule 2201]
13. Permittee shall record natural gas and propane consumption. Records shall be retained for at least two years and provided to the District upon request. [District Rule 1070]
14. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. [District Rule 4305]
15. {109} 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]
16. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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Air Pollution Control District

PERMIT UNIT: C-311-51-10 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 6-31 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN 4131-G-LNX BURNER WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit
2. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. 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 NSR Rule] Federally Enforceable Through Title V Permit

19. The flue gas recirculation system shall be operated in accordance with the manufacturer's directions whenever the steam generator is operating. [District NSR Rule] Federally Enforceable Through Title V Permit

20. This unit shall be fired exclusively with natural gas or LPG. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Natural gas or LPG consumption shall not exceed 1404 MMBtu/day nor 434700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit

22. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Emissions shall not exceed any of the following limits: NO2 - 50.5 lb/day, SO2 - 4.56 lb/day, PM10 - 9.48 lb/day, CO - 48.0 lb/day, and VOC (NMHC) - 12.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Emissions shall not exceed any of the following limits: NO2 - 0.036 lb/MMBtu, SO2 - 0.003 lb/MMBtu, VOC - 0.003 lb/MMBtu, and CO - 0.035 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

25. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. 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

27. 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

28. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. If the NOx or CO concentrations, as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentrations are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

33. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

34. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. Permittee shall record daily natural gas and propane consumption. Records shall be provided to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

36. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source; or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

38. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. Source testing shall be performed for NOx (ppmv) according to EPA method 7E (or ARB Method 100) and EPA Method 10 (or ARB Method 100) for CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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41. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

43. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-52-12 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG STRUTHERS THERMOFLOOD STEAM GENERATOR #6-32, MODEL 0H-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GLE LOW-NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND AN OXYGEN CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired exclusively with natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total gas consumption of this unit shall not exceed either of the following limits: 1,404 MMBtu/day or 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall maintain a non-resettable, totalizing mass or volumetric flow meter in the fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801] Federally Enforceable Through Title V Permit
6. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Emissions from the steam generator shall not exceed any of the following limits: 0.140 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, or 0.008 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Except during start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 15 ppmvd NOx @ 3% O2, equivalent to 0.0182 lb-NOx/MMBtu or 50 ppmvd CO @ 3% O2, equivalent to 0.037 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

14. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

16. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

17. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 8,332 lb-NOx/yr, 51.9 lb-CO/day, or 16,939 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, and 4306, 6.3.1] Federally Enforceable Through Title V Permit

19. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. 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 2520, 9.3.2, 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

21. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

22. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The source test plan shall indicate which test method shall be used to demonstrate compliance. [District Rule 1081] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

25. 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 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

28. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

29. Sampling facilities for source testing shall be provided in accordance with the provisions of rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

31. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

32. 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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

33. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

34. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

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36. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

37. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for natural gas used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Permittee shall maintain records of daily natural gas consumption. [District Rule 1070] Federally Enforceable Through Title V Permit

41. 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, 2520, 9.4.2, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1081 (Amended December 16, 1993), 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

45. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

46. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-53-13 **EXPIRATION DATE:** 12/31/2005

SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #6-33, MODEL OH-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GLE LOW-NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND AN OXYGEN CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired exclusively with natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total gas consumption of this unit shall not exceed either of the following limits: 1,404 MMBtu/day or 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall maintain a non-resettable, totalizing mass or volumetric flow meter in the fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801] Federally Enforceable Through Title V Permit
6. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Emissions from the steam generator shall not exceed any of the following limits: 0.140 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, or 0.008 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Except during start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 15 ppmvd NOx @ 3% O2, equivalent to 0.0182 lb-NOx/MMBtu or 50 ppmvd CO @ 3% O2, equivalent to 0.037 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

14. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

16. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

17. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 8,332 lb-NOx/yr, 51.9 lb-CO/day, or 16,939 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, and 4306, 6.3.1] Federally Enforceable Through Title V Permit

19. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. 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 2520, 9.3.2, 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

21. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

22. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The source test plan shall indicate which test method shall be used to demonstrate compliance. [District Rule 1081] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

25. 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 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

28. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

29. Sampling facilities for source testing shall be provided in accordance with the provisions of rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

31. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

32. 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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

33. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

34. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

37. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for natural gas used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Permittee shall maintain records of daily natural gas consumption. [District Rule 1070] Federally Enforceable Through Title V Permit

41. 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, 2520, 9.4.2, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1081 (Amended December 16, 1993), 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

45. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

46. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-76-10 **EXPIRATION DATE:** 12/31/2005

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SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR STRUTHERS THERMOFLOOD (SG 6-38) MODEL OH-50-ND-16XAM NATURAL GAS/LPG/TEOR GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL MAGNA FLAME GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION SYSTEM INCLUDING AN OXYGEN CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired exclusively with natural gas, LPG, or TEOR gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total fuel consumption shall not exceed 1,404 MMBtu/day nor 434,700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
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 NSR Rule] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
6. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Except during start-up and shutdown, emissions from this steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.043 lb-SOx/MMBtu, 0.00675 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.00855 lb-VOC/MMBtu. [District NSR Rule and District Rule 4306, 5.1] Federally Enforceable Through Title V Permit

13. During start-up and shutdown, emissions from this steam generator shall not exceed any of the following limits: 0.1 lb-NOx/MMBtu, 0.043 lb-SOx/MMBtu, 0.00675 lb-PM10/MMBtu, 0.084 lb-CO/MMBtu, or 0.00855 lb-VOC/MMBtu. [District NSR Rule and District Rule 4306, 5.1] Federally Enforceable Through Title V Permit

14. Maximum emissions from this steam generator, including start-up and shutdown operation, shall not exceed any of the following limits: 50.5 lb-NOx in any one day, 7,825 lb-NOx in any calendar year, 66.4 lb-CO in any one day, or 16,084 lb-CO in any calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Start-up is defined as that period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as that period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.22, 3.25] Federally Enforceable Through Title V Permit

16. The duration of each start-up or each shutdown shall not exceed two hours per occurrence. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown. The operator shall maintain daily records of the number and duration of start-up and shutdown periods. [District Rule 4306, 5.3] Federally Enforceable Through Title V Permit

17. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306, 6.3] Federally Enforceable Through Title V Permit

18. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

19. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

21. 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, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

22. 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, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

23. 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

24. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081] Federally Enforceable Through Title V Permit

25. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2] Federally Enforceable Through Title V Permit

28. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

29. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

30. 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, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

31. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

32. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 3 months prior to the date the stack concentrations are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

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33. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

34. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

36. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

38. Permittee shall record daily natural gas, casing gas, and propane consumption. Records shall be provided to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

40. 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, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

41. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of District Rules 1081 (Amended December 16, 1993), 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

44. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

45. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-77-5 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 91 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-2-13D WITH LOW PRESSURE SCRUBBER-SEPARATOR, AIR COOLER AND CONDENSATE COLLECTOR.

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PERMIT UNIT REQUIREMENTS

1. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
2. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
3. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
4. 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, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
5. 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, 5.2.2] 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 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, 5.2.2] Federally Enforceable Through Title V Permit
7. 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, 5.3.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. 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, 5.3.2] Federally Enforceable Through Title V Permit

9. 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, 5.3.3] Federally Enforceable Through Title V Permit

10. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit

11. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit

12. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

13. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit

14. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit

15. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit

16. 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, 5.5.1] Federally Enforceable Through Title V Permit

17. 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 the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit

18. 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, 5.5.3] Federally Enforceable Through Title V Permit

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19. 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, 5.5.4] Federally Enforceable Through Title V Permit

20. 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, 5.5.4] Federally Enforceable Through Title V Permit

21. 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, 5.5.5] Federally Enforceable Through Title V Permit

22. 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, 5.5.6] Federally Enforceable Through Title V Permit

23. 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, 5.5.7] Federally Enforceable Through Title V Permit

24. 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] Federally Enforceable Through Title V Permit

25. 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 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

26. 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, 6.1.4] Federally Enforceable Through Title V Permit

27. 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, 6.1.5] Federally Enforceable Through Title V Permit

28. 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, 6.1.6] Federally Enforceable Through Title V Permit

29. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit

30. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. 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. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit

31. 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. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

32. 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, 6.1.10] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit

34. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

35. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 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, 6.2.3] Federally Enforceable Through Title V Permit

36. 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] Federally Enforceable Through Title V Permit

37. 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] Federally Enforceable Through Title V Permit

38. 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] Federally Enforceable Through Title V Permit

39. 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, 6.3.4] Federally Enforceable Through Title V Permit

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40. 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] Federally Enforceable Through Title V Permit

41. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

42. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit

43. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit

44. {1667} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

45. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

46. Operation of the low pressure scrubber-separator and the air cooler is optional. [District NSR Rule] Federally Enforceable Through Title V Permit

47. Collected vapors shall be incinerated in steam generators approved by the District for TEOR gas incineration. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit

48. VOC emissions shall not exceed 2.237 lb/day per well. [District NSR Rule] Federally Enforceable Through Title V Permit

49. Permittee shall maintain a current roster of all wells connected to this system. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit

50. {520} The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-78-3 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 149 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-4-13D WITH SCRUBBER, FIN-FAN AIR COOLER AND CONDENSATE COLLECTOR.

PERMIT UNIT REQUIREMENTS

1. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
2. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
3. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
4. 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, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
5. 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, 5.2.2] 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 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, 5.2.2] Federally Enforceable Through Title V Permit
7. 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, 5.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. 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, 5.3.2] Federally Enforceable Through Title V Permit

9. 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, 5.3.3] Federally Enforceable Through Title V Permit

10. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit

11. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit

12. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

13. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit

14. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit

15. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit

16. 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, 5.5.1] Federally Enforceable Through Title V Permit

17. 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 the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit

18. 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, 5.5.3] Federally Enforceable Through Title V Permit

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19. 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, 5.5.4] Federally Enforceable Through Title V Permit

20. 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, 5.5.4] Federally Enforceable Through Title V Permit

21. 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, 5.5.5] Federally Enforceable Through Title V Permit

22. 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, 5.5.6] Federally Enforceable Through Title V Permit

23. 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, 5.5.7] Federally Enforceable Through Title V Permit

24. 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] Federally Enforceable Through Title V Permit

25. 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 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

26. 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, 6.1.4] Federally Enforceable Through Title V Permit

27. 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, 6.1.5] Federally Enforceable Through Title V Permit

28. 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, 6.1.6] Federally Enforceable Through Title V Permit

29. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit

30. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. 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. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit

31. 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. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

32. 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, 6.1.10] Federally Enforceable Through Title V Permit

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33. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit

34. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

35. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 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, 6.2.3] Federally Enforceable Through Title V Permit

36. 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] Federally Enforceable Through Title V Permit

37. 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] Federally Enforceable Through Title V Permit

38. 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] Federally Enforceable Through Title V Permit

39. 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, 6.3.4] Federally Enforceable Through Title V Permit

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40. 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] Federally Enforceable Through Title V Permit
41. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
42. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
43. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
44. {1667} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. Operation of the fin-fan air cooler is optional. [District NSR Rule] Federally Enforceable Through Title V Permit
47. Collected vapors shall be incinerated in steam generators approved by the District for TEOR gas incineration. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
48. VOC emissions shall not exceed 2.237 lb/day per well. [District NSR Rule] Federally Enforceable Through Title V Permit
49. Permittee shall maintain a current roster of all wells connected to this system. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
50. {520} The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-79-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 241 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-1-25D WITH TWO 100 HP COMPRESSOR, SEPARATOR AND CONDENSATE COLLECTOR.

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PERMIT UNIT REQUIREMENTS

1. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
2. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
3. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
4. 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, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
5. 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, 5.2.2] 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 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, 5.2.2] Federally Enforceable Through Title V Permit
7. 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, 5.3.1] Federally Enforceable Through Title V Permit

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8. 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, 5.3.2] Federally Enforceable Through Title V Permit

9. 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, 5.3.3] Federally Enforceable Through Title V Permit

10. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit

11. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit

12. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

13. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit

14. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit

15. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit

16. 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, 5.5.1] Federally Enforceable Through Title V Permit

17. 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 the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit

18. 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, 5.5.3] Federally Enforceable Through Title V Permit

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19. 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, 5.5.4] Federally Enforceable Through Title V Permit

20. 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, 5.5.4] Federally Enforceable Through Title V Permit

21. 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, 5.5.5] Federally Enforceable Through Title V Permit

22. 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, 5.5.6] Federally Enforceable Through Title V Permit

23. 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, 5.5.7] Federally Enforceable Through Title V Permit

24. 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] Federally Enforceable Through Title V Permit

25. 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 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

26. 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, 6.1.4] Federally Enforceable Through Title V Permit

27. 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, 6.1.5] Federally Enforceable Through Title V Permit

28. 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, 6.1.6] Federally Enforceable Through Title V Permit

29. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit

30. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. 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. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit

31. 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. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

32. 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, 6.1.10] Federally Enforceable Through Title V Permit

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33. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit

34. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

35. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 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, 6.2.3] Federally Enforceable Through Title V Permit

36. 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] Federally Enforceable Through Title V Permit

37. 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] Federally Enforceable Through Title V Permit

38. 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] Federally Enforceable Through Title V Permit

39. 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, 6.3.4] Federally Enforceable Through Title V Permit

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40. 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] Federally Enforceable Through Title V Permit
41. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
42. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
43. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
44. {1667} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. Operation of the 100 hp compressor is optional. [District NSR Rule] Federally Enforceable Through Title V Permit
47. Collected vapors shall be incinerated in steam generators approved by the District for TEOR gas incineration. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
48. The VOC portion of the Total Organic Compounds (TOC) present in the well vent vapors shall not exceed 34.9% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit
49. Total VOC emissions shall not exceed 185.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
50. Permittee shall maintain a current roster of all wells connected to this system. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
51. {520} The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-83-4 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20 **RANGE:** 14

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 196 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-3-13D WITH SCRUBBER, FIN-FAN AIR COOLER AND CONDENSATE COLLECTOR (SOUTHWEST)

PERMIT UNIT REQUIREMENTS

1. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
2. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
3. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
4. 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, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
5. 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, 5.2.2] 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 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, 5.2.2] Federally Enforceable Through Title V Permit
7. 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, 5.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. 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, 5.3.2] Federally Enforceable Through Title V Permit

9. 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, 5.3.3] Federally Enforceable Through Title V Permit

10. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit

11. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit

12. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

13. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit

14. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit

15. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit

16. 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, 5.5.1] Federally Enforceable Through Title V Permit

17. 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 the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit

18. 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, 5.5.3] Federally Enforceable Through Title V Permit

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19. 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, 5.5.4] Federally Enforceable Through Title V Permit

20. 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, 5.5.4] Federally Enforceable Through Title V Permit

21. 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, 5.5.5] Federally Enforceable Through Title V Permit

22. 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, 5.5.6] Federally Enforceable Through Title V Permit

23. 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, 5.5.7] Federally Enforceable Through Title V Permit

24. 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] Federally Enforceable Through Title V Permit

25. 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 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

26. 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, 6.1.4] Federally Enforceable Through Title V Permit

27. 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, 6.1.5] Federally Enforceable Through Title V Permit

28. 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, 6.1.6] Federally Enforceable Through Title V Permit

29. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit

30. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. 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. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit

31. 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. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

32. 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, 6.1.10] Federally Enforceable Through Title V Permit

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33. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit

34. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

35. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 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, 6.2.3] Federally Enforceable Through Title V Permit

36. 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] Federally Enforceable Through Title V Permit

37. 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] Federally Enforceable Through Title V Permit

38. 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] Federally Enforceable Through Title V Permit

39. 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, 6.3.4] Federally Enforceable Through Title V Permit

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40. 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] Federally Enforceable Through Title V Permit
41. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
42. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
43. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
44. {1667} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. Operation of the fin-fan air cooler is optional. [District NSR Rule] Federally Enforceable Through Title V Permit
47. Collected vapors shall be incinerated in steam generators approved by the District for TEOR gas incineration. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
48. VOC emissions shall not exceed 259.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
49. Permittee shall maintain a current roster of all wells connected to this system. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
50. {520} The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-84-10 **EXPIRATION DATE:** 12/31/2005

SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR STRUTHERS THERMOFLOOD (SG 6-37) MODELOH5O-ND-16XAM NATURAL GAS/LPG/TEOR GAS (COMMON TO C-311-37, SG 25-19) FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL MAGNA FLAME GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired exclusively with natural gas, LPG, or TEOR gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total fuel consumption shall not exceed 1,404 MMBtu/day nor 434,700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
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 NSR Rule] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
6. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. Except during start-up and shutdown, emissions from this steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.043 lb-SOx/MMBtu, 0.00675 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.00855 lb-VOC/MMBtu. [District NSR Rule and District Rule 4306, 5.1] Federally Enforceable Through Title V Permit

12. During start-up and shutdown, emissions from this steam generator shall not exceed any of the following limits: 0.1 lb-NOx/MMBtu, 0.043 lb-SOx/MMBtu, 0.00675 lb-PM10/MMBtu, 0.084 lb-CO/MMBtu, or 0.00855 lb-VOC/MMBtu. [District NSR Rule and District Rule 4306, 5.1] Federally Enforceable Through Title V Permit

13. Maximum emissions from this steam generator, including start-up and shutdown operation, shall not exceed any of the following limits: 50.5 lb-NOx in any one day, 7,825 lb-NOx in any calendar year, 66.4 lb-CO in any one day, or 16,084 lb-CO in any calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Start-up is defined as that period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as that period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.22, 3.25] Federally Enforceable Through Title V Permit

15. The duration of each start-up or each shutdown shall not exceed two hours per occurrence. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown. The operator shall maintain daily records of the number and duration of start-up and shutdown periods. [District Rule 4306, 5.3] Federally Enforceable Through Title V Permit

16. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306, 6.3] Federally Enforceable Through Title V Permit

17. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

18. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

20. 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, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

21. 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, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

22. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081] Federally Enforceable Through Title V Permit

24. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

28. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

29. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

30. 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, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

31. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

32. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source; or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Permittee shall record daily natural gas, casing gas, and propane consumption. Records shall be provided to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

34. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

35. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. 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, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of District Rules 1081 (Amended December 16, 1993), 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

38. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

39. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

40. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

41. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-88-8 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
77.3 MMBTU/HR COGENERATION SYSTEM WITH A 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-104, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-204, WITH A 36.4 MMBTU/HR COEN DUCT BURNER.

PERMIT UNIT REQUIREMENTS

1. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern and Stanislaus), and 110 (Madera); 40 CFR 60.332 (a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335 (a), (b), (c), and (e). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
2. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVUAPCD Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
3. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rule 1081; Rules 406 (Fresno), 407 (Kings, San Joaquin, Stanislaus, Tulare, Merced, and Kern), and 404(Madera); 40 CFR 60.332(c), (d); 60.334 (b), and (c)(2); 60.335(d). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
4. {780} Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081; Rule 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), Rule 110 (Madera), and Rule 108 (Kings)] Federally Enforceable Through Title V Permit
5. The water-to-fuel ratio shall not be less than 0.45 on a weight basis. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Natural gas consumption by this turbine system (turbine and associated duct burners combine) shall not exceed 1,812,000 scf/day nor 654 million scf/year. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Natural gas consumption by this turbine shall not exceed 358 million scf/year (equivalent to 358,000 MMBtu/year). [District NSR Rule] Federally Enforceable Through Title V Permit
8. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The natural gas shall not exceed a nitrogen content of 7.8% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit
10. NOx emissions from turbine system (with or without duct burner firing) shall not exceed 35 ppmv NOx@ 15% O2 or 0.129 lb-NOx/MMBtu at an averaging period of 3 hours. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4701] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. CO emissions from turbine system with duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb CO/MMBtu. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4701] Federally Enforceable Through Title V Permit

12. CO emissions from turbine system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4701] Federally Enforceable Through Title V Permit

13. Emissions from the turbine system (with or without duct burner firing) shall not exceed the following limits: 0.002 lb SOx/MMBtu, 0.026 lb PM10/MMBtu, or 0.026 lb VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Units shall be fired exclusively on PUC-quality natural gas which has a sulfur content of less than or equal to 0.01% by weight. [40 CFR 60.333(a) & (b);60.332(a); District NSR Rule, Rule 404 (Madera), 406 (Fresno) and 407 (6 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

15. {781} If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

16. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

17. Source testing for NOx and CO shall be conducted within 60 days of initial start-up and annually thereafter. [District Rules 1081 and 2201]

18. {783} The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

19. {785} Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.2] Federally Enforceable Through Title V Permit

20. The operator shall provide source test information annually regarding the exhaust gas CO concentration corrected to 15% O2 (dry). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

22. {758} Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

23. Carbon monoxide emissions for compliance tests shall be determined by using EPA Test Methods 10 or 10B. [District Rule 4703, 6.4.2 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. {791} Permittee shall install, operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NOx concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334] Federally Enforceable Through Title V Permit

25. {793} Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

26. Operator shall submit a semiannual report listing any quarterly period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

27. {795} Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit

28. {796} Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit

29. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District NSR Rule] Federally Enforceable Through Title V Permit

30. The turbine system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

31. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

32. Malfunctions in the monitoring equipment shall be reported to the District. [District Rule 1100, 7.0] Federally Enforceable Through Title V Permit

33. {741} The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

34. {786} The operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

35. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

37. {787} Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-93-8 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-101, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-201, WITH A 36.4 MMBTU/HR COEN DUCT BURNER

PERMIT UNIT REQUIREMENTS

1. {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption by the cogeneration system (turbine and duct burner) shall not exceed 1,812,000 scf/day. Natural gas consumption by the cogeneration system shall not exceed 654 million scf/year. [District Rule 2201]
4. Emissions from the cogeneration system shall not exceed any of the following limits: 233.7 lb-NOx/day, 3.6 lb-SOx/day, 47.1 lb-PM10/day, 257.3 lb-CO/day, or 47.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration exceeding 35 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 and 4703, 5.1.2.1] Federally Enforceable Through Title V Permit
6. CO emissions from the cogeneration system with the duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb-CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. CO emissions from the cogeneration system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
8. Emissions from the cogeneration system (with or without duct burner firing) shall not exceed any of the following limits: 0.002 lb-SOx/MMBtu, 0.026 lb-PM10/MMBtu, or 0.026 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Reduced Load Period shall be defined as the time during which the gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate, not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit
10. Thermal Stabilization Period shall be defined as the startup or shutdown, as defined in 40 CFR 60.2, time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per startup or shutdown event. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) and the natural gas shall have a total sulfur content less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b) and District Rules 2201 and 4201] Federally Enforceable Through Title V Permit

12. The sulfur fuel content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377, or double GC for H2S and mercaptans. If the sulfur fuel content is less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every 6 months. If any six-month monitoring tests result in a sulfur fuel content exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

13. Performance testing shall be conducted annually to measure NOx and CO emissions concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The test will be comprised of three test runs performed at the highest physically achievable load of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, and 6.4] Federally Enforceable Through Title V Permit

14. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. Source testing shall not be required with the duct burner on if it has not been in operation during the previous 12 months, i.e. the duct burner need not be started to solely perform source testing. Source testing shall not be required with the duct burner off if it has been in continuous operation during the previous 12 months, i.e. the duct burner need not be shut-down solely to perform source testing. Source testing shall be performed within 60 days of startup or shutdown of the duct burner unless source testing of the duct burner has been performed in the previous 12 months. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

15. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

16. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in Rule 1081 (as amended 12/16/93), Sections 3.0 and 6.1. [District Rule1081] Federally Enforceable Through Title V Permit

17. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for approval 15 days prior to such testing. [District Rule 1081] Federally Enforceable Through Title V Permit

18. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall develop and keep on-site a parameter monitoring plan which includes the procedures used to document the proper operation of the NOx emissions controls (water injection). This plan shall include the parameter(s) monitored, such as the water-to-fuel ratio, and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturers recommendations and other relevant information shall be included in the monitoring plan. [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

21. The water to fuel ratio shall not be less than 0.45 on a weight basis. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

22. The owner or operator shall submit a semi-annual excess NOx emissions and monitor downtime report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by the 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water-to-fuel ratio, turbine load, nature and cause of excess emissions (if known), and corrective actions taken and preventative measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2)] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Excess emissions shall be defined as any operating hour for which the steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into the turbine shall also be considered as excess emissions. [40 CR 60.334(j)(1)(i)(A)] Federally Enforceable Through Title V Permit

24. Monitor downtime shall be any operating hour in which the water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit

25. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The cogeneration system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

30. {741} The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The owner or operator shall maintain a record of the cumulative rolling 12 month fuel usage for each turbine. The record shall be updated at the end of each calendar month. [District Rule 2201] Federally Enforceable Through Title V Permit

34. {787} Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

35. {2271} The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (a)(2), 60.333 (b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(b), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 1081(as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, 7.3 and Rule 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-95-8 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14

EQUIPMENT DESCRIPTION:
86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-102, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-202, WITH A 36.4 MMBTU/HR COEN DUCT BURNER

PERMIT UNIT REQUIREMENTS

1. {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption by the cogeneration system (turbine and duct burner) shall not exceed 1,812,000 scf/day. Natural gas consumption by the cogeneration system shall not exceed 654 million scf/year. [District Rule 2201]
4. Emissions from the cogeneration system shall not exceed any of the following limits: 233.7 lb-NOx/day, 3.6 lb-SOx/day, 47.1 lb-PM10/day, 257.3 lb-CO/day, or 47.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration exceeding 35 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 and 4703, 5.1.2.1] Federally Enforceable Through Title V Permit
6. CO emissions from the cogeneration system with the duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb-CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. CO emissions from the cogeneration system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
8. Emissions from the cogeneration system (with or without duct burner firing) shall not exceed any of the following limits: 0.002 lb-SOx/MMBtu, 0.026 lb-PM10/MMBtu, or 0.026 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Reduced Load Period shall be defined as the time during which the gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate, not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit
10. Thermal Stabilization Period shall be defined as the startup or shutdown, as defined in 40 CFR 60.2, time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per startup or shutdown event. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) and the natural gas shall have a total sulfur content less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b) and District Rules 2201 and 4201] Federally Enforceable Through Title V Permit

12. The sulfur fuel content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377, or double GC for H2S and mercaptans. If the sulfur fuel content is less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every 6 months. If any six-month monitoring tests result in a sulfur fuel content exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

13. Performance testing shall be conducted annually to measure NOx and CO emissions concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The test will be comprised of three test runs performed at the highest physically achievable load of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, and 6.4] Federally Enforceable Through Title V Permit

14. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. Source testing shall not be required with the duct burner on if it has not been in operation during the previous 12 months, i.e. the duct burner need not be started to solely perform source testing. Source testing shall not be required with the duct burner off if it has been in continuous operation during the previous 12 months, i.e. the duct burner need not be shut-down solely to perform source testing. Source testing shall be performed within 60 days of startup or shutdown of the duct burner unless source testing of the duct burner has been performed in the previous 12 months. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

15. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

16. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in Rule 1081 (as amended 12/16/93), Sections 3.0 and 6.1. [District Rule1081] Federally Enforceable Through Title V Permit

17. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for approval 15 days prior to such testing. [District Rule 1081] Federally Enforceable Through Title V Permit

18. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall develop and keep on-site a parameter monitoring plan which includes the procedures used to document the proper operation of the NOx emissions controls (water injection). This plan shall include the parameter(s) monitored, such as the water-to-fuel ratio, and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturers recommendations and other relevant information shall be included in the monitoring plan. [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

21. The water to fuel ratio shall not be less than 0.45 on a weight basis. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

22. The owner or operator shall submit a semi-annual excess NOx emissions and monitor downtime report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by the 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water-to-fuel ratio, turbine load, nature and cause of excess emissions (if known), and corrective actions taken and preventative measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2)] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Excess emissions shall be defined as any operating hour for which the steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into the turbine shall also be considered as excess emissions. [40 CR 60.334(j)(1)(i)(A)] Federally Enforceable Through Title V Permit

24. Monitor downtime shall be any operating hour in which the water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit

25. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The cogeneration system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

30. {741} The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The owner or operator shall maintain a record of the cumulative rolling 12 month fuel usage for each turbine. The record shall be updated at the end of each calendar month. [District Rule 2201] Federally Enforceable Through Title V Permit

34. {787} Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

35. {2271} The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (a)(2), 60.333 (b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(b), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 1081(as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, 7.3 and Rule 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-97-8 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-103, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-203, WITH A 36.4 MMBTU/HR COEN DUCT BURNER

PERMIT UNIT REQUIREMENTS

1. {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption by the cogeneration system (turbine and duct burner) shall not exceed 1,812,000 scf/day. Natural gas consumption by the cogeneration system shall not exceed 654 million scf/year. [District Rule 2201]
4. Emissions from the cogeneration system shall not exceed any of the following limits: 233.7 lb-NOx/day, 3.6 lb-SOx/day, 47.1 lb-PM10/day, 257.3 lb-CO/day, or 47.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration exceeding 35 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 and 4703, 5.1.2.1] Federally Enforceable Through Title V Permit
6. CO emissions from the cogeneration system with the duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb-CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. CO emissions from the cogeneration system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
8. Emissions from the cogeneration system (with or without duct burner firing) shall not exceed any of the following limits: 0.002 lb-SOx/MMBtu, 0.026 lb-PM10/MMBtu, or 0.026 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Reduced Load Period shall be defined as the time during which the gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate, not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit
10. Thermal Stabilization Period shall be defined as the startup or shutdown, as defined in 40 CFR 60.2, time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per startup or shutdown event. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

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

11. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) and the natural gas shall have a total sulfur content less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b) and District Rules 2201 and 4201] Federally Enforceable Through Title V Permit

12. The sulfur fuel content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377, or double GC for H2S and mercaptans. If the sulfur fuel content is less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every 6 months. If any six-month monitoring tests result in a sulfur fuel content exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

13. Performance testing shall be conducted annually to measure NOx and CO emissions concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The test will be comprised of three test runs performed at the highest physically achievable load of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, and 6.4] Federally Enforceable Through Title V Permit

14. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. Source testing shall not be required with the duct burner on if it has not been in operation during the previous 12 months, i.e. the duct burner need not be started to solely perform source testing. Source testing shall not be required with the duct burner off if it has been in continuous operation during the previous 12 months, i.e. the duct burner need not be shut-down solely to perform source testing. Source testing shall be performed within 60 days of startup or shutdown of the duct burner unless source testing of the duct burner has been performed in the previous 12 months. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

15. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

16. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in Rule 1081 (as amended 12/16/93), Sections 3.0 and 6.1. [District Rule1081] Federally Enforceable Through Title V Permit

17. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for approval 15 days prior to such testing. [District Rule 1081] Federally Enforceable Through Title V Permit

18. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall develop and keep on-site a parameter monitoring plan which includes the procedures used to document the proper operation of the NOx emissions controls (water injection). This plan shall include the parameter(s) monitored, such as the water-to-fuel ratio, and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturers recommendations and other relevant information shall be included in the monitoring plan. [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

21. The water to fuel ratio shall not be less than 0.45 on a weight basis. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

22. The owner or operator shall submit a semi-annual excess NOx emissions and monitor downtime report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by the 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water-to-fuel ratio, turbine load, nature and cause of excess emissions (if known), and corrective actions taken and preventative measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2)] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Excess emissions shall be defined as any operating hour for which the steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into the turbine shall also be considered as excess emissions. [40 CR 60.334(j)(1)(i)(A)] Federally Enforceable Through Title V Permit

24. Monitor downtime shall be any operating hour in which the water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit

25. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The cogeneration system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

30. {741} The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The owner or operator shall maintain a record of the cumulative rolling 12 month fuel usage for each turbine. The record shall be updated at the end of each calendar month. [District Rule 2201] Federally Enforceable Through Title V Permit

34. {787} Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

35. {2271} The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (a)(2), 60.333 (b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(b), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 1081(as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, 7.3 and Rule 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-105-3

EXPIRATION DATE: 12/31/2005

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EQUIPMENT DESCRIPTION:
118 CLOSED-VENT CYCLIC WELLS.

PERMIT UNIT REQUIREMENTS

1. Sulfur compound emissions shall not exceed 2000 ppmv as SO2. [District Rule 4801, 3.0] Federally Enforceable Through Title V Permit
2. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
3. 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, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
4. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
5. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401, 3.20] 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, 5.2.2] 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, 5.2.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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, 5.3.1] 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, 5.3.2] Federally Enforceable Through Title V Permit

10. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit

11. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit

12. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

13. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit

14. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit

15. 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, 5.5.1] Federally Enforceable Through Title V Permit

16. 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 the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit

17. 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, 5.5.3] Federally Enforceable Through Title V Permit

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18. 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, 5.5.4] Federally Enforceable Through Title V Permit

19. 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, 5.5.5] Federally Enforceable Through Title V Permit

20. 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, 5.5.6] Federally Enforceable Through Title V Permit

21. 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, 5.5.7] Federally Enforceable Through Title V Permit

22. 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] Federally Enforceable Through Title V Permit

23. 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, 6.1.5] Federally Enforceable Through Title V Permit

24. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit

25. 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] Federally Enforceable Through Title V Permit

26. 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] Federally Enforceable Through Title V Permit

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27. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
28. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
29. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
30. Permittee shall maintain a current well roster of all closed vent wells, and such roster shall be made readily available for District inspection upon request. [District 4401 Rule] Federally Enforceable Through Title V Permit
31. {520} The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-106-2

EXPIRATION DATE: 12/31/2005

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EQUIPMENT DESCRIPTION:
20 CLOSED VENT STEAM DRIVE WELLS.

PERMIT UNIT REQUIREMENTS

1. Sulfur compound emissions shall not exceed 2000 ppmv as SO2. [District Rule 4801, 3.0] Federally Enforceable Through Title V Permit
2. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
3. 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, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
4. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
5. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401, 3.20] 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, 5.2.2] 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, 5.2.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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, 5.3.1] 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, 5.3.2] Federally Enforceable Through Title V Permit

10. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit

11. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit

12. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

13. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit

14. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit

15. 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, 5.5.1] Federally Enforceable Through Title V Permit

16. 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 the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit

17. 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, 5.5.3] Federally Enforceable Through Title V Permit

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18. 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, 5.5.4] Federally Enforceable Through Title V Permit

19. 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, 5.5.5] Federally Enforceable Through Title V Permit

20. 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, 5.5.6] Federally Enforceable Through Title V Permit

21. 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, 5.5.7] Federally Enforceable Through Title V Permit

22. 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] Federally Enforceable Through Title V Permit

23. 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, 6.1.5] Federally Enforceable Through Title V Permit

24. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit

25. 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] Federally Enforceable Through Title V Permit

26. 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] Federally Enforceable Through Title V Permit

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27. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
28. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
29. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
30. Permittee shall maintain a current well roster of all closed vent wells, and such roster shall be made readily available for District inspection upon request. [District 4401 Rule] Federally Enforceable Through Title V Permit
31. {520} The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-111-4 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 70 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-1-13D WITH SEPARATOR, LOW PRESSURE AIR COOLER AND CONDENSATE COLLECTOR (SOUTHEAST)

PERMIT UNIT REQUIREMENTS

1. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
2. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
3. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
4. 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, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
5. 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, 5.2.2] 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 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, 5.2.2] Federally Enforceable Through Title V Permit
7. 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, 5.3.1] Federally Enforceable Through Title V Permit

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8. 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, 5.3.2] Federally Enforceable Through Title V Permit

9. 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, 5.3.3] Federally Enforceable Through Title V Permit

10. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit

11. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit

12. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

13. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit

14. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit

15. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit

16. 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, 5.5.1] Federally Enforceable Through Title V Permit

17. 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 the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit

18. 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, 5.5.3] Federally Enforceable Through Title V Permit

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19. 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, 5.5.4] Federally Enforceable Through Title V Permit

20. 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, 5.5.4] Federally Enforceable Through Title V Permit

21. 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, 5.5.5] Federally Enforceable Through Title V Permit

22. 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, 5.5.6] Federally Enforceable Through Title V Permit

23. 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, 5.5.7] Federally Enforceable Through Title V Permit

24. 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] Federally Enforceable Through Title V Permit

25. 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 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

26. 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, 6.1.4] Federally Enforceable Through Title V Permit

27. 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, 6.1.5] Federally Enforceable Through Title V Permit

28. 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, 6.1.6] Federally Enforceable Through Title V Permit

29. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit

30. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. 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. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit

31. 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. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

32. 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, 6.1.10] Federally Enforceable Through Title V Permit

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33. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit

34. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

35. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 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, 6.2.3] Federally Enforceable Through Title V Permit

36. 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] Federally Enforceable Through Title V Permit

37. 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] Federally Enforceable Through Title V Permit

38. 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] Federally Enforceable Through Title V Permit

39. 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, 6.3.4] Federally Enforceable Through Title V Permit

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40. 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] Federally Enforceable Through Title V Permit

41. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

42. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit

43. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit

44. {1667} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

45. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

46. Operation of the low pressure air cooler is optional. [District NSR Rule] Federally Enforceable Through Title V Permit

47. Collected vapors shall be incinerated in steam generators approved by the District for TEOR gas incineration. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit

48. The VOC portion of the Total Organic Compounds (TOC) present in the well vent vapors shall not exceed 13.4% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

49. Total VOC emissions shall not exceed 20.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

50. Permittee shall maintain a current roster of all wells connected to this system. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit

51. {520} The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-112-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
WELL CASING COLLECTION SYSTEM #6C-CC-1 SERVING 20 AUTOMATIC WELL TESTERS AND 326 STEAM DRIVEN PRODUCTION WELLS WITH A INLET SEPARATOR VESSEL, TWO FIN-FAN EXCHANGERS, OUTLET SEPARATOR VESSEL, TWO CENTRIFUGAL TRANSFER PUMPS, MIST ELIMINATOR, AND ASSOCIATED PIPING

PERMIT UNIT REQUIREMENTS

1. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
2. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
3. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
4. 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, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
5. 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, 5.2.2] 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 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, 5.2.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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7. 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, 5.3.1] Federally Enforceable Through Title V Permit

8. 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, 5.3.2] Federally Enforceable Through Title V Permit

9. 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, 5.3.3] Federally Enforceable Through Title V Permit

10. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit

11. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit

12. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

13. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit

14. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit

15. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit

16. 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, 5.5.1] Federally Enforceable Through Title V Permit

17. 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 the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

18. 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, 5.5.3] Federally Enforceable Through Title V Permit

19. 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, 5.5.4] Federally Enforceable Through Title V Permit

20. 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, 5.5.4] Federally Enforceable Through Title V Permit

21. 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, 5.5.5] Federally Enforceable Through Title V Permit

22. 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, 5.5.6] Federally Enforceable Through Title V Permit

23. 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, 5.5.7] Federally Enforceable Through Title V Permit

24. 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] Federally Enforceable Through Title V Permit

25. 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 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

26. 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, 6.1.4] Federally Enforceable Through Title V Permit

27. 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, 6.1.5] Federally Enforceable Through Title V Permit

28. 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, 6.1.6] Federally Enforceable Through Title V Permit

29. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit

30. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. 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. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit

31. 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. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. 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, 6.1.10] Federally Enforceable Through Title V Permit

33. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit

34. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

35. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 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, 6.2.3] Federally Enforceable Through Title V Permit

36. 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] Federally Enforceable Through Title V Permit

37. 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] Federally Enforceable Through Title V Permit

38. 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] Federally Enforceable Through Title V Permit

39. 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, 6.3.4] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

40. 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] Federally Enforceable Through Title V Permit

41. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

42. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit

43. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit

44. {1667} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

45. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

46. Volatile Organic Compound (VOC) emissions shall not exceed 2.237 lb/day per well. [District NSR Rule] Federally Enforceable Through Title V Permit

47. Operation of the fin fan exchanger is optional. [District NSR Rule] Federally Enforceable Through Title V Permit

48. The 6C-CC-1 system may be operated as a vapor balance system and/or an active well vent vapor recovery system. When operated as a vapor balance system valves associated with the 6C-CC-1 system may be closed to allow condensate and noncondensable gas to be displaced to the reservoir through wells served by the system. [District NSR Rule] Federally Enforceable Through Title V Permit

49. Collected VOC vapors shall be incinerated in steam generators C-311-36, '-37, '-38, '-39, '-40, '-41, '-52, '-53, '-55, '-56, '-76, -'84, or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit

50. Permittee shall provide District with a copy of D.O.G.G.R. approval for each vapor disposal well prior to use for vapor injection. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

51. Permittee shall maintain a current roster of all wells connected to this system. [District Rule 4401] Federally Enforceable Through Title V Permit

52. Gases from the separator vessels shall be vented to the casing collection system. [District NSR Rule] Federally Enforceable Through Title V Permit

53. Oil/water production piping for all wells associated with this casing collection system shall be connected one or more Chevron tanks under District approved tank vapor recovery systems. [District NSR Rule] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

54. Operation of the casing collection system as a casing balance system shall not cause gas flow rates at the 6C and or 13D Oil Cleaning Plant in excess of the design capacity of the tank vapor recovery compressor. [District NSR Rule] Federally Enforceable Through Title V Permit

55. {520} The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-114-4 **EXPIRATION DATE:** 12/31/2005

SECTION: 18 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
23 MMBTU/HR HOPPER STEAM GENERATOR, HSG-36, NATURAL GAS FIRED WITH ONE NORTH AMERICAN BURNER, DIS #21013-66.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. {15} 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]
8. Natural gas consumption shall not exceed 526,000 cubic feet per day nor 192 million cubic feet per year. [District Rule 2201]
9. Fuel consumption shall be recorded on a daily basis. Records shall be retained for at least two years and made available to the District upon request. [District Rule 1070]
10. This unit shall be fired exclusively with natural gas. [District Rule 2201]
11. Daily emission limit shall not exceed: PM10 - 2.63 lb/day, SOx - 0.32 lb/day, NOx - 18.9 lb/day, CO - 18.4 lb/day, or VOC(NMHC) - 1.47 lb/day. [District Rule 2201]

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-117-4

EXPIRATION DATE: 12/31/2005

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SECTION: 18 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
23 MMBTU/HR HOPPER STEAM GENERATOR, HSG-1, NATURAL GAS FIRED, WITH ONE NORTH AMERICAN BURNER, DIS #5702-66.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. {15} 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]
8. Natural gas consumption shall not exceed 526,000 cubic feet per day nor 192 million cubic feet per year. [District Rule 2201]
9. Fuel consumption shall be recorded on a daily basis. Records shall be retained for at least two years and made available to the District upon request. [District Rule 1070]
10. This unit shall be fired exclusively with natural gas. [District Rule 2201]
11. Daily emission limit shall not exceed: PM10 - 2.63 lb/day, SOx - 0.32 lb/day, NOx - 18.9 lb/day, CO - 18.4 lb/day, or VOC(NMHC) - 1.47 lb/day. [District Rule 2201]

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-122-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-101: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

37. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

41. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. When storing organic liquids of TVP less than 0.5 psia, permittee may conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

44. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

45. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

50. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

51. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-123-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-102: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

41. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

44. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

45. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

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49. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

50. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

51. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-124-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-103: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

45. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

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49. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

50. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

52. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-125-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-400: 84,546 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H, CAPACITY: 2,013 BBLS: SERVED BY SHARED VAPOR RECOVERY SYSTEM ON PERMIT UNIT C-311-129

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PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

45. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

49. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

50. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

52. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-126-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-300: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

45. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

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49. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

50. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

52. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-127-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-200: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39.0'D X 24.0'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

40. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

41. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

42. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

45. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

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50. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

53. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-128-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-201: 126,840 GALLON (3,020 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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46. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

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50. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

52. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-129-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-500: 216,468 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 48'D X 16'H, SERVED BY A VAPOR RECOVERY SYSTEM INCLUDING CONDENSER, COMPRESSOR, CONDENSATE COLLECTION VESSEL, TRANSFER PUMP AND BACK-UP/STANDBY ELECTRIC COMPRESSOR SERVED BY SHARED CASING COLLECTION SYSTEM FOR SECTION 6C - PERMIT UNIT C-311-112 AND TANK PERMIT UNITS C-311-122, -123, -124, -125, -126, -127, -128 AND -129

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. Throughput of liquid to the storage tank shall not exceed 5.88 million gallons per year. [District NSR Rule] Federally Enforceable Through Title V Permit

42. VOC emissions from this tanks shall not exceed 2.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Vapor pressure of liquids stored shall not exceed 5 psia reid vapor pressure nor 3.6 psia true vapor pressure. [District NSR Rule] Federally Enforceable Through Title V Permit

44. Collected condensed vapors shall be returned to one of the storage tanks served by the vapor recovery system. [District NSR Rule] Federally Enforceable Through Title V Permit

45. Permittee shall record annual liquid throughput and true vapor pressure of the liquids stored. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit

46. The vapor recovery system shall control the tanks identified in permit units C-311-122, -123, -124, -125, -126, -127, -128 and -129. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

50. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V / Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

54. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

55. The vapor recovery system may control the recovered well casing vapors from permit unit C-311-112 during operation of the casing collection system as a casing balance system. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit

56. The 6C-CC-1 system (C-311-112) may be operated as a vapor balance system and/or an active well vent vapor recovery system. When operated as a vapor balance system valves associated with the 6C-CC-1 system (C-311-112) may be closed to allow condensate and noncondensable gas to be displaced to the reservoir through wells served by the system. [District NSR Rule] Federally Enforceable Through Title V Permit

57. Collected VOC vapors shall be incinerated in steam generators C-311-36, '-37, '-38, '-39, '-40, '-41, '-52, '-53, '-55, '-56, '-76 and -'84, or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit

58. Operation of the casing collection system as a casing balance system shall not cause gas flow rates at the 6C, 13D and/or 25D Oil Cleaning Plant in excess of the design capacity of the tank vapor recovery compressor. [District NSR Rule] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-142-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 11 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #3369: 24,554 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 16'H, CAPACITY: 537 BBLS.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
9. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-143-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 11 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #3581: 225,546 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 24'H, CAPACITY: 5,368 BBLS.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
9. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-146-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #13-23: 84,546 GALLON (2,013 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING (2) 50 HP COMPRESSOR, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM FOR PERMIT UNITS C-311-112, -146, -147, -149, -150, -196, -197 AND -198

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
3. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
4. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. The tank vapor recovery system shall be connected to tanks permitted as PTO #C-311-146, '-147, '-150, '-196, '-197, '-198 and -236. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Collected VOC vapors shall be incinerated in steam generators C-311-19, '-20, '-27, '-28, -'30, -36, '-37, '-38, '-39, '-40 and '-41, or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit
7. The vapor recovery system may control the recovered well casing vapors from permit units C-311-77, '-78, '-83 and '-111 during operation of the casing collection system as a casing balance system. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit
8. The 13D system (C-311-77, '-78, '-83 and '-111) may be operated as a vapor balance system and/or an active well vent vapor recovery system. When operated as a vapor balance system, valves associated with the 13D system (C-311-77, '-78, '-83 and '-111) may be closed to allow condensate and noncondensable gas to be displaced to the reservoir through wells served by the system. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Operation of the casing collection system as a casing balance system shall not cause gas flow rates at the 6C, 13D and/or 25D Oil Cleaning Plant in excess of the design capacity of the tank vapor recovery compressor. [District NSR Rule] Federally Enforceable Through Title V Permit

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10. VOC fugitive emissions from the components in gas and liquid service for the storage tank shall not exceed 16.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

11. VOC fugitive emissions from the components in gas and liquid service for the vapor control system shall not exceed 31.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Fugitive VOC emissions shall be calculated using EPA's "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission Factors. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of the number and type of components installed and the calculated fugitive emissions. Permittee shall update such records when new components are installed or removed. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit

15. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit

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

17. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit

18. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit

19. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

20. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

21. 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, 6.4.4] Federally Enforceable Through Title V Permit

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22. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

23. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

28. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

31. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

41. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

43. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

44. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

45. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

49. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

50. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

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51. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

54. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

55. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

56. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

57. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

58. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

59. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

60. {1740} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

61. {1741} This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended May 16, 2002) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-147-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #13-22: 84,546 GALLON (2,013 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

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PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

45. This tank shall only store crude oil with a true vapor pressure (TVP) of less than 11.0 psia. [District NSR Rule] Federally Enforceable Through Title V Permit

46. Collected vapors are to be incinerated in gas fired steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

47. Permittee shall record annual throughput of crude oil. Records shall be retained for five years and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

51. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

54. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

55. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-150-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14

EQUIPMENT DESCRIPTION:
TANK #13-18: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

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PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

45. Collected vapors are to be incinerated in gas fired steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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50. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

54. Permittee shall record annual throughput of crude oil. Records shall be retained for five years and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-151-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 36 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK I.D. NO. T-200, 544 BBL FIXED ROOF WEMCO SKIM STORAGE TANK (22' DIAMETER X 8' HEIGHT). CAPACITY: 22,800 GALLONS.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-163-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-31: 197,274 GALLON (4,697 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 21'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

45. 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 4623] Federally Enforceable Through Title V Permit

46. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

54. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

55. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-164-7 **EXPIRATION DATE:** 12/31/2005

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SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-32: 197,274 GALLON (4,697 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 21'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

45. 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 4623] Federally Enforceable Through Title V Permit

46. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

54. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

55. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-165-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-29: 234,864 GALLON (5,592 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 50'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

45. 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 4623] Federally Enforceable Through Title V Permit

46. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

54. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

55. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-166-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-30: 234,864 GALLON (5,592 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 50'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

45. 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 4623] Federally Enforceable Through Title V Permit

46. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

54. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

55. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-167-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-33: 150,318 GALLON (3,579 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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44. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

45. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

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49. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

50. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-168-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-34: 150,318 GALLON (3,579 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

45. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

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49. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

50. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-169-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-60: 59,808 GALLON (1,424 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 26.5'D X 14.5'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

45. 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 4623] Federally Enforceable Through Title V Permit

46. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

54. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

55. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-170-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-37: 79,842 GALLON (1,901 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 8.5'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

45. 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 4623] Federally Enforceable Through Title V Permit

46. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

54. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

55. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-177-8 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-42: 210,000 GALLON (5,047 BBL) FIXED ROOF FREE WATER KNOCK OUT TANK, 47.5'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING 50 HP COMPRESSOR AND 50 HP BACKUP COMPRESSOR, TWO VERTICAL SCRUBBERS, FIN FAN COOLER, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM WITH PERMIT UNITS C-311-163, -164, -165, -166, -167, -168, -169, -170 AND -177

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PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. Collected vapor shall be incinerated in steam generators approved by the District for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

41. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

42. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

45. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

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50. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

53. The vapor recovery system shall control the tanks identified in permit units C-311-163, -164, -165, -166, -167, -168, -169, -170 and -177. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit

54. The vapor recovery system may control the recovered well casing vapors from permit unit C-311-79 during operation of the casing collection system as a casing balance system. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit

55. The 25D system (C-311-79) may be operated as a vapor balance system and/or an active well vent vapor recovery system. When operated as a vapor balance system valves associated with the 25D system (C-311-79) may be closed to allow condensate and noncondensable gas to be displaced to the reservoir through wells served by the system. [District NSR Rule] Federally Enforceable Through Title V Permit

56. Collected VOC vapors shall be incinerated in steam generators C-311-36, '-37, '-38, '-39, '-40 and '-41 or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit

57. Operation of the casing collection system as a casing balance system shall not cause gas flow rates at the 6C, 13D and/or 25D Oil Cleaning Plant in excess of the design capacity of the tank vapor recovery compressor. [District NSR Rule] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-180-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #T-3: 19,740 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 15.5'H, CAPACITY: 523 BBLS.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-181-2 **EXPIRATION DATE:** 12/31/2005

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SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #T-4: 19,740 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 15.5'H, CAPACITY: 523 BBLS.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-182-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #T-5: 11,298 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 8'H, CAPACITY: 269 BBLS.

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PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-193-2 **EXPIRATION DATE:** 12/31/2005

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SECTION: 36 **TOWNSHIP:** 19S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #CO-T-57: 10,584 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15'D X 8'H, CAPACITY: 252 BBLS.

PERMIT UNIT REQUIREMENTS

1. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, 2520, 9.4.2, and 9.5.2] Federally Enforceable Through Title V Permit
2. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
3. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-194-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 36 **TOWNSHIP:** 19S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #CO-T-58: 10,584 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15'D X 8'H, CAPACITY: 252 BBLS.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-196-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 13D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #13-29: 210,000 GALLON (5,000 BBL) FIXED ROOF WASH TANK, 38.37' D X 24' H, SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. 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 NSR Rule] Federally Enforceable Through Title V Permit

45. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

46. Collected vapors are to be incinerated in gas fired steam generators. [District Rule 4623] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

52. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

54. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

55. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

56. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-197-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 13D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #13-30: 5,000 BBL FIXED ROOF WASH TANK, 38.75' D X 24'H, SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

54. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

55. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-198-7 **EXPIRATION DATE:** 12/31/2005

SECTION: 13D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #13-13: 11,300 GALLON FIXED ROOF SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. 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 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

9. 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, 6.4.4] Federally Enforceable Through Title V Permit

10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]

31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. 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 NSR Rule] Federally Enforceable Through Title V Permit

42. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Collected vapors are to be incinerated in gas fired steam generators. [District Rule 4623, 5.3.1] Federally Enforceable Through Title V Permit

44. Throughput of crude oil shall not exceed 200 bbl per day. [District NSR Rule] Federally Enforceable Through Title V Permit

45. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit

46. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

47. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

48. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

49. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

50. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

51. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

52. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

53. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

54. Permittee shall record average daily throughput of crude oil. Records shall be retained for five years and provided to the District upon request. [District NSR Rule and 2520, 9.5.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-205-2

EXPIRATION DATE: 12/31/2005

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EQUIPMENT DESCRIPTION:
20 OPEN-VENT CYCLIC WELLS.

PERMIT UNIT REQUIREMENTS

1. There may be no more than 20 open-vent cyclic-driven petroleum production wells at this stationary source. [District Rule 4401] Federally Enforceable Through Title V Permit
2. The well is located more than 1000 feet from an existing well vent vapor control system operated by the company. [District Rule 4401, 4.5.1] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-215-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-1, 21'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-216-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK 24-2, 21'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-217-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
84,000 GALLONS (2,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-3, 30'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-219-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK 24-5, 21'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-220-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-6, 21'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-221-2 **EXPIRATION DATE:** 12/31/2005

DRAFT

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
84,000 GALLON (2,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-7, 30'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-222-5 **EXPIRATION DATE:** 12/31/2005

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EQUIPMENT DESCRIPTION:
126,000 GALLON (3000 BBLS) CONE BOTTOM WASH TANK #24-9, 24' HEIGHT X 30' DIAMETER

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
11. VOC emissions shall not exceed 1.5 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-223-3 **EXPIRATION DATE:** 12/31/2005

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EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-10, 21'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The tank shall be operated at constant level. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. VOC emissions shall not exceed 1.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-226-2 **EXPIRATION DATE:** 12/31/2005

DRAFT

EQUIPMENT DESCRIPTION:
126,000-GALLON (3000 BBLS) FIXED ROOF TANK (NEW TANK), 24' HEIGHT X 30' DIAMETER

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-227-1 **EXPIRATION DATE:** 12/31/2005

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EQUIPMENT DESCRIPTION:
ONE 2,000 GALLON ABOVE GROUND STORAGE TANK SERVED BY TWO-POINT PHASE I VAPOR RECOVERY SYSTEM AND ONE FUELING POINT WITH ONE GASOLINE DISPENSING NOZZLE SERVED BY BALANCE PHASE II VAPOR RECOVERY SYSTEM (G-70-116-A).

PERMIT UNIT REQUIREMENTS

1. The Phase I and Phase II vapor recovery systems shall be installed and maintained in accordance with the manufacturer specifications and the ARB Executive Orders specified in this permit, including applicable rules and regulations of the Division of Measurement Standards of the Department of Food and Agriculture, the Office of the State Fire Marshal of the Department of Forestry and Fire Protection, the Division of Occupational Safety and Health of the Department of Industrial Relations, and the Division of Water Quality of the State Water Resources Control Board that have been made conditions of the certification. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
2. This gasoline storage and dispensing equipment shall not be used in retail sales, where gasoline dispensed by the unit is subject to payment of California sales tax on gasoline sales. [District Rule 4622] Federally Enforceable Through Title V Permit
3. The storage container shall be installed, maintained, and operated such that they are leak-free. [District Rule 4621] Federally Enforceable Through Title V Permit
4. The Phase I and Phase II vapor recovery systems and gasoline dispensing equipment shall be maintained without leaks as determined in accordance with the test method specified in this permit. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
5. A leak is defined as the dripping of VOC-containing liquid at a rate of more than three (3) drops per minute, or the detection of any gaseous or vapor emissions with a concentration of total organic compound greater than 10,000 ppmv, as methane, above background when measured in accordance with EPA Test Method 21. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
6. No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are displayed on the cargo container, which attest to the vapor integrity of the container. [District Rule 4621] Federally Enforceable Through Title V Permit
7. No person shall operate any ARB certified Phase II vapor recovery system or any portion thereof that has a major defect or an equipment defect that is identified in any applicable ARB Executive Order until the following conditions have been met: 1) the defect has been repaired, replaced, or adjusted as necessary to correct the defect; 2) the District has been notified, and the District has reinspected the system or authorized the system for use (such authorization shall not include the authority to operate the equipment prior to the correction of the defective components); and 3) all major defects, after repair, are duly entered into the Operations and Maintenance (O&M) manual. [District Rule 4622] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. Upon identification of any major defects, the permittee shall tag "Out-of-Order" all dispensing equipment for which vapor recovery has been impaired. Tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defective equipment has been repaired, replaced, or adjusted, as necessary. In the case of defects identified by the District, tagged equipment shall be rendered inoperable, and the tag shall not be removed until the District has been notified of the repairs, and the District has either reinspected the system or authorized the tagged equipment for use. [District Rule 4622] Federally Enforceable Through Title V Permit

9. The permittee shall implement a periodic maintenance inspection program for the certified Phase II vapor recovery system consistent with the requirements of this permit. The program shall be documented in an operation and maintenance (O&M) manual and shall at a minimum contain the following information: 1) copies of all vapor recovery performance tests; 2) all applicable ARB Executive Orders, Approval Letters, and District Permits; 3) the manufacturer's specifications and instructions for installation, operation, repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction provided by the manufacturer; 4) system and/or component testing requirements, including test schedules and passing criteria for each of the standard tests required by this permit (the owner/operator may include any non-ARB required diagnostic and other tests as part of the testing requirements), and 5) additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, ARB Executive Orders, and District permit conditions, including replacement schedules for failure or wear prone components. [District Rule 4622] Federally Enforceable Through Title V Permit

10. The permittee shall conduct periodic maintenance inspections based on the greatest monthly throughput of gasoline dispensed by the facility in the previous year as follows: A) less than 2,500 gallons - one day per month; B) 2,500 to less than 25,000 gallons - one day per week; or C) 25,000 gallons or greater - five days per week. All inspections shall be documented within the O & M Manual. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

11. Periodic maintenance inspections of the Phase I vapor recovery system shall include, at a minimum, verification that 1) the fill caps and vapor caps are not missing, damaged, or loose; 2) the fill cap gasket and vapor cap gaskets are not missing or damaged; 3) the fill adapter and vapor adapter are securely attached to the risers; 4) where applicable, the spring-loaded submerged fill tube seals properly against the coaxial tubing; 5) the dry break (poppet-valve) is not missing or damaged; and 6) the submerged fill tube is not missing or damaged. [District Rule 4621] Federally Enforceable Through Title V Permit

12. Periodic maintenance inspections of the Phase II vapor recovery system shall include, at a minimum, verification that 1) the fueling instructions required by this permit are clearly displayed with the appropriate toll-free complaint phone number and toxic warning signs; 2) the following nozzle components are in place and in good condition as specified in ARB Executive Order as applicable: faceplate/facecone, bellows, latching device spring, vapor check valve, spout (proper diameter/vapor collection holes), insertion interlock mechanism, automatic shut-off mechanism, and hold open latch (unless prohibited by law or the local fire control authority); 3) the hoses are not torn, flattened or crimped; 4) the vapor path of the coaxial hoses associated with bellows equipped nozzles does not contain more than 100 ml of liquid if applicable; and 5) the vapor processing unit is functioning properly, for operations that are required to have or possess such a unit. [District Rule 4622] Federally Enforceable Through Title V Permit

13. In the event of a separation due to a drive off, the permittee shall, unless otherwise specified in the applicable ARB Executive Order, conduct a visual inspection of the affected equipment and either 1) perform qualified repairs on any damaged components and conduct applicable re-verification tests pursuant to the requirements of this permit, or 2) replace the affected nozzles, coaxial hoses, breakaway couplings, and any other damaged components with new or certified rebuilt components that are ARB certified. The activities shall be documented in accordance with the requirements of this permit before placing the affected equipment back in service. [District Rule 4622] Federally Enforceable Through Title V Permit

14. The permittee shall conduct all periodic vapor recovery system performance tests specified in this permit, no more than 30 days before or after the required compliance testing date, unless otherwise required under the applicable ARB Executive Order. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

15. The permittee shall perform and pass a Static Leak Test for Aboveground Tanks using ARB TP-201.3B or TP-206.3 at least once every 12 months. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

16. A person conducting testing of, or repairs to, a certified vapor recovery system shall be in compliance with District Rule 1177 (Gasoline Dispensing Facility Tester Certification). [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

17. A person performing installation of, or maintenance on, a certified Phase I or Phase II vapor recovery system shall be certified by the ICC for Vapor Recovery System Installation and Repair, or work under the direct and personal supervision of an individual physically present at the work site who is certified. The ICC certification shall be renewed every 24 months. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

18. Proof of the ICC certification and all other certifications required by the Executive Order and installation and operation manual shall be made available onsite. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

19. The permittee shall notify the District at least 7 days prior to each performance test. The test results shall be submitted to the District no later than 30 days after the completion of each test. [District Rule 4621] Federally Enforceable Through Title V Permit

20. The permittee shall maintain a copy of all test results. The test results shall be dated and shall contain the name, address, and telephone number of the company responsible for system installation and testing. [District Rule 4622] Federally Enforceable Through Title V Permit

21. The permittee shall maintain on the premises a log of any repairs made to the certified Phase I or Phase II vapor recovery system. The repair log shall include the following: 1) date and time of each repair; 2) the name and applicable certification numbers of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer; 3) description of service performed; 4) each component that was repaired, serviced, or removed; 5) each component that was installed as replacement, if applicable; and 6) receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs. [District Rule 4622] Federally Enforceable Through Title V Permit

22. The O&M manual shall be kept at the dispensing operation and made available to any person who operates, inspects, maintains, repairs, or tests the equipment at the operation as well as to District personnel upon request. [District Rule 4622] Federally Enforceable Through Title V Permit

23. The permittee shall maintain monthly and annual gasoline throughput records. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

24. All records required by this permit shall be retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

25. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVAPCD Rules 4621 except section 5.2.2 (as amended June 18, 1998), 4622 (as amended September 19, 2002), and 4623, section 5.4 (as amended May 19, 2005). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

26. This unit is not equipment used for light crude oil and gas production, natural gas processing, nor organic liquid loading. Therefore, the requirements of Kern County Rule 412.1 and 413 do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. This permit unit is not equipment used for light crude oil and gas production, natural gas processing, nor organic liquid loading, and is not an internal or external floating roof tank with a capacity of 19,800 gallons or more. Therefore, the requirements of District Rule 4403 (as amended April 20, 2005), 4623 except section 5.4 (as amended May 19, 2005), and 4624 (as amended December 17, 1992) do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

28. This permit unit is not associated with loading at a bulk gasoline terminal (as defined in 40 CFR $^{\perp}$ 60.501). Therefore, the requirements of 40 CFR 60 Subpart XX do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-228-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
MS-716, VAPOR RECOVERY PLANT, FOR WELL CASING HEAD HYDROCARBON VAPOR RECOVERY, UTILIZING THE FOLLOWING EQUIPMENT: 11V1 LIQUID SCRUBBER; 10E1 GAS WATER COOLER; 10V2 CONDENSATE KO DRUM; 10P1 CONDENSATE PUMP SERVING 46 WELLS.

PERMIT UNIT REQUIREMENTS

1. Vapor recovery system shall operate at a collection efficiency of 99 percent. [District Rule 2520, 9.1] Federally Enforceable Through Title V Permit
2. A record of all wells serviced by this vapor recovery system and which well casing vents are shut-in shall be maintained, retained on the premises. [District Rule 1070 and Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
3. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
4. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by source testers certified by the California Air Resources Board (CARB) during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the annual testing requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless open flare, and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components and number of components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. VOC content shall be determined using ASTM Method E168-67, E169-63, or E260-73 as applicable. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Annual performance tests for hydrocarbon must be conducted and reported in accordance with the test methods set for the in 40 CFR 60, Part 60.8 and Appendix A. Performance tests for hydrocarbon shall be conducted using procedures approved in advance by the EPA in writing. The EPA and APCO must be notified in writing at least 30 day prior to conduction such tests. [PSD 4-4-8, SJ77-45 condition IX.H.1 and IXH.2] Federally Enforceable Through Title V Permit

14. Formerly C-1121-115-1

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-229-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1,000 BBL) FIXED ROOF CRUDE OIL TANK (#T-1432) WITH DIAMETER 21', HEIGHT 16'

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. {1743} This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. {1742} This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Formerly C-1121-140-2

DRAFT

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-230-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK (#T-9729) WITH DIAMETER 21', HEIGHT 16'

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [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.

11. {1743} This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. {1742} This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Formerly C-1121-142-2

DRAFT

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-231-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK (#T-9731) WITH DIAMETER 21', HEIGHT 16'

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PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. {1743} This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. {1742} This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Formerly C-1121-143-2

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-232-1 **EXPIRATION DATE:** 12/31/2005

DRAFT

SECTION: 31 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK WITH DIAMETER 21', HEIGHT 16'

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. {1743} This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. {1742} This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Formerly C-1121-162-2

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-233-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 31 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK WITH DIAMETER 21', HEIGHT 16'

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PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] 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, 4.4] Federally Enforceable Through Title V Permit
3. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
5. {2589} 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, 6.4.4] Federally Enforceable Through Title V Permit
6. {2590} For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] 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, 6.3.6] Federally Enforceable Through Title V Permit
9. {2592} As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The operator shall keep an accurate daily record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. [District Rules 2520, 9.3.2 & 4623, 6.3.1] Federally Enforceable Through Title V Permit

11. {1743} This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. {1742} This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Formerly C-1121-163-2

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-234-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 31 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK WITH DIAMETER 21', HEIGHT 16'

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PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2.1.1. of District Rule 4623, 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. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1. through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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

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11. {1743} This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. {1742} This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Formerly C-1121-164-2

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-235-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 25D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
600 BHP CUMMINGS MODEL #KTA19C52 (SERIAL #31134968) DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Emissions from this IC engine shall not exceed any of the following limits: 14.1 g-NOx/bhp-hr, 3.03 g-CO/bhp-hr, or 1.14 g-VOC/bhp-hr. [17 CCR 93115]
4. Emissions from this IC engine shall not exceed 1.0 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [17 CCR 93115]
5. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rule 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit
6. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702] Federally Enforceable Through Title V Permit
7. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702] Federally Enforceable Through Title V Permit
8. On and after May 3, 2013, the engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
9. On and after May 3, 2013, the permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
10. On and after May 3, 2013, the engine's oil and filter shall be changed every 500 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
11. On and after May 3, 2013, the engine's air filter shall be inspected every 1,000 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
12. On and after May 3, 2013, the engine's hoses and belts shall be inspected every 500 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

14. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

15. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

16. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit

17. The permittee shall maintain monthly records that include the type of fuel purchased, the amount of fuel purchased, and the date of fuel purchase. [District Rules 4702 and 2520, 9.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

18. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702 and 2520, 9.4, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

19. On and after May 3, 2013, the permittee shall maintain monthly records of all performance tests, opacity and visible emissions observations and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070, 2520, 9.4 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

20. On and after May 3, 2013, the permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070, 2520, 9.4 and 40 CFR 63 Subpart ZZZZ] 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, 4702, 2520, 9.4, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

22. This permit unit was formerly number C-311-91.

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-237-2 **EXPIRATION DATE:** 12/31/2005

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EQUIPMENT DESCRIPTION:
TANK #T-7: 126,000 GALLON (3,000 BBL) FIXED ROOF CRUDE OIL STORAGE/WASH TANK (30'D X 24'H) WITH PV VALVE

PERMIT UNIT REQUIREMENTS

1. VOC emission rate from the tank shall not exceed 310.9 lb/day, based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The total daily throughput of oil shall not exceed 938 barrels (for combined storage and wash tank operation), based on a monthly average. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
3. The total annual throughput of oil shall not exceed 180,000 barrels (for combined storage and wash tank operation). [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
4. The total daily throughput of oil and water combined shall not exceed 5,811 barrels (for combined storage and wash tank operation), based on a monthly average. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
5. The total annual throughput of oil and water combined shall not exceed 126,774 barrels (for storage operation only), based on a calendar year. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a fixed roof and maintained with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
8. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 2201] Federally Enforceable Through Title V Permit
9. 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
10. 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
11. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. 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
13. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Permittee shall maintain monthly and annual records of average daily oil and water throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. 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
16. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
17. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-240-2

EXPIRATION DATE: 12/31/2005

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EQUIPMENT DESCRIPTION:
600 BBL PRESSURE VESSEL VENTED TO TEOR OPERATION C-311-79

PERMIT UNIT REQUIREMENTS

1. Fugitive VOC emission components exclude piping and components handling produced fluids having less than 10% VOC by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly sampling of tank vapors to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
6. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
7. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit

10. {3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]

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ATTACHMENT B

Previous Title V Operating Permit

Permit to Operate

FACILITY: C-311 **EXPIRATION DATE:** 12/31/2005

LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

FACILITY LOCATION: HEAVY OIL PRODUCTION
FRESNO COUNTY, CA

FACILITY DESCRIPTION: OIL 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

David Warner
Director of Permit Services

Oct 26 2011 3:26PM -- BUSHT

San Joaquin Valley
Air Pollution Control District

FACILITY: C-311-0-1 **EXPIRATION DATE:** 12/31/2005

FACILITY-WIDE REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. 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. 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 (9/17/98). [District Rule 2010, 3.0 and 4.0; 2020; and County Rule 201 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
5. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.12.1] Federally Enforceable Through Title V Permit
6. 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. Every application for a permit required under Rule 2010 (12/17/92) (Permits Required) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. 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, 9.5.1] Federally Enforceable Through Title V Permit
9. 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, 9.5.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

10. 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, 9.6.1] Federally Enforceable Through Title V Permit

11. 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. [District Rules 2520, 9.6.2 and 1100, 7.0] Federally Enforceable Through Title V Permit

12. 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, 9.8] Federally Enforceable Through Title V Permit

13. 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, 9.9.2] Federally Enforceable Through Title V Permit

14. 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, 9.9.3] Federally Enforceable Through Title V Permit

15. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.9.4] Federally Enforceable Through Title V Permit

16. 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, 9.9.5] Federally Enforceable Through Title V Permit

17. 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, 9.10] Federally Enforceable Through Title V Permit

18. 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, 9.14.2.1] Federally Enforceable Through Title V Permit

19. 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, 9.14.2.2] Federally Enforceable Through Title V Permit

20. 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, 9.14.2.3] Federally Enforceable Through Title V Permit

21. 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, 9.14.2.4] Federally Enforceable Through Title V Permit

22. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (12/17/92), by using EPA method 9. 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

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

23. No person shall supply, sell, solicit or apply any architectural coating, except specialty coatings, that contains more than 250 grams of VOC per liter of coating (less water and exempt compounds, and excluding any colorant added to tint bases), or manufacture, blend, or repackage such coating with more than 250 grams of VOC per liter (less water and exempt compounds, and excluding any colorant added to tint bases) for use within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit

24. Specialty Coating Limitations: No person shall apply, sell, solicit, or offer for sale any specialty architectural coating listed in the Table of Standards (District Rule 4601, Table 1 and Table 2), nor manufacture, blend, or repackage such coating for use within the District, which contains VOCs in excess of the specified limits after the corresponding date listed in Table 1 (grams of VOC per liter of coating as applied less water and exempt compounds, excluding any colorant added to tint bases) and in Table 2 (grams of VOC per liter of material), except as provided in Section 5.3 of Rule 4601. [District Rule 4601, 5.2] Federally Enforceable Through Title V Permit

25. All VOC-containing materials shall be stored in closed containers when not in use. In use includes, but is not limited to: being accessed, filled, emptied, maintained or repaired. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit

26. A person shall not use VOCs for the cleanup of spray equipment unless equipment for collection of the cleaning compounds and minimizing its evaporation to the atmosphere is used. [District Rule 4601, 5.5] Federally Enforceable Through Title V Permit

27. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.2. [District Rule 4601, 6.1 and 6.2] Federally Enforceable Through Title V Permit

28. 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; 9.14.1 and 10.0] Federally Enforceable Through Title V Permit

29. 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

30. 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

31. Disturbances of soil related to any construction, demolition, excavation, extraction, or water mining activities shall comply with the requirements for fugitive dust control in SJVUAPCD District Rule 8020 unless specifically exempted under section 4 of Rule 8020. [District Rule 8020] Federally Enforceable Through Title V Permit

32. Outdoor handling and storage of any bulk material which emits dust shall comply with the requirements of SJVUAPCD Rule 8030, unless specifically exempted under section 4 of Rule 8030. [District Rule 8030] Federally Enforceable Through Title V Permit

33. Any paved road over 3 miles in length, and any unpaved roads over half a mile in length, constructed after December 10, 1993 shall use the design criteria and dust control measures of, and comply with the administrative requirements of, SJVUAPCD Rule 8060 unless specifically exempted under section 4 of Rule 8060. [District Rule 8060] Federally Enforceable Through Title V Permit

34. 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

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

35. 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, 9.17] Federally Enforceable Through Title V Permit

36. 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

37. 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 permit shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit

38. Compliance with permit conditions in the Title V permit shall be deemed 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), 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

39. Compliance with permit conditions in the Title V permit shall be deemed 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 (12/17/92); 4601, sections 5.1, 5.2, 5.4, 5.5, 6.1, and 6.2 (9/17/97); 8020 (4/25/96); 8030 (4/25/96); 8060 (4/25/96); A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

41. Facility shall comply with all applicable requirements regarding preparation and implementation of a risk management plan (RMP) by August 31, 1999, and shall abide by all applicable sections of 40 CFR Part 68. [40 CFR Part 68] Federally Enforceable Through Title V Permit

42. On September 30, 2001, the initial Title V permit was issued, the reporting period of the Report of Required Monitoring and the Compliance Certification Report are based upon this initial permit issuance date, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days of the end of reporting period. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-13-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-105, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-205, WITH A 36.4 MMBTU/HR COEN DUCT BURNER

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption by the cogeneration system (turbine and duct burner) shall not exceed 1,812,000 scf/day. Natural gas consumption by the cogeneration system shall not exceed 654 million scf/year. [District Rule 2201]
4. Emissions from the cogeneration system shall not exceed any of the following limits: 233.7 lb-NOx/day, 3.6 lb-SOx/day, 47.1 lb-PM10/day, 257.3 lb-CO/day, or 47.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration exceeding 35 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 and 4703, 5.1.2.1] Federally Enforceable Through Title V Permit
6. CO emissions from the cogeneration system with the duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb-CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. CO emissions from the cogeneration system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
8. Emissions from the cogeneration system (with or without duct burner firing) shall not exceed any of the following limits: 0.002 lb-SOx/MMBtu, 0.026 lb-PM10/MMBtu, or 0.026 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Reduced Load Period shall be defined as the time during which the gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate, not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit
10. Thermal Stabilization Period shall be defined as the startup or shutdown, as defined in 40 CFR 60.2, time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per startup or shutdown event. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) and the natural gas shall have a total sulfur content less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b) and District Rules 2201 and 4201] Federally Enforceable Through Title V Permit

12. The sulfur fuel content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377, or double GC for H2S and mercaptans. If the sulfur fuel content is less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every 6 months. If any six-month monitoring tests result in a sulfur fuel content exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

13. Performance testing shall be conducted annually to measure NOx and CO emissions concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The test will be comprised of three test runs performed at the highest physically achievable load of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, and 6.4] Federally Enforceable Through Title V Permit

14. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. Source testing shall not be required with the duct burner on if it has not been in operation during the previous 12 months, i.e. the duct burner need not be started to solely perform source testing. Source testing shall not be required with the duct burner off if it has been in continuous operation during the previous 12 months, i.e. the duct burner need not be shut-down solely to perform source testing. Source testing shall be performed within 60 days of startup or shutdown of the duct burner unless source testing of the duct burner has been performed in the previous 12 months. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

15. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

16. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in Rule 1081 (as amended 12/16/93), Sections 3.0 and 6.1. [District Rule1081] Federally Enforceable Through Title V Permit

17. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for approval 15 days prior to such testing. [District Rule 1081] Federally Enforceable Through Title V Permit

18. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall develop and keep on-site a parameter monitoring plan which includes the procedures used to document the proper operation of the NOx emissions controls (water injection). This plan shall include the parameter(s) monitored, such as the water-to-fuel ratio, and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturers recommendations and other relevant information shall be included in the monitoring plan. [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

21. The water to fuel ratio shall not be less than 0.45 on a weight basis. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

22. The owner or operator shall submit a semi-annual excess NOx emissions and monitor downtime report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by the 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water-to-fuel ratio, turbine load, nature and cause of excess emissions (if known), and corrective actions taken and preventative measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Excess emissions shall be defined as any operating hour for which the steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into the turbine shall also be considered as excess emissions. [40 CR 60.334(j)(1)(i)(A)] Federally Enforceable Through Title V Permit

24. Monitor downtime shall be any operating hour in which the water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit

25. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The cogeneration system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

30. The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The owner or operator shall maintain a record of the cumulative rolling 12 month fuel usage for each turbine. The record shall be updated at the end of each calendar month. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

35. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (a)(2), 60.333 (b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(b), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 1081(as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, 7.3 and Rule 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-15-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-106, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-206 WITH A 36.4 MMBTU/HR COEN DUCT BURNER

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption by the cogeneration system (turbine and duct burner) shall not exceed 1,812,000 scf/day. Natural gas consumption by the cogeneration system shall not exceed 654 million scf/year. [District Rule 2201]
4. Emissions from the cogeneration system shall not exceed any of the following limits: 233.7 lb-NOx/day, 3.6 lb-SOx/day, 47.1 lb-PM10/day, 257.3 lb-CO/day, or 47.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration exceeding 35 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 and 4703, 5.1.2.1] Federally Enforceable Through Title V Permit
6. CO emissions from the cogeneration system with the duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb-CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. CO emissions from the cogeneration system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
8. Emissions from the cogeneration system (with or without duct burner firing) shall not exceed any of the following limits: 0.002 lb-SOx/MMBtu, 0.026 lb-PM10/MMBtu, or 0.026 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Reduced Load Period shall be defined as the time during which the gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate, not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit
10. Thermal Stabilization Period shall be defined as the startup or shutdown, as defined in 40 CFR 60.2, time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per startup or shutdown event. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) and the natural gas shall have a total sulfur content less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b) and District Rules 2201 and 4201] Federally Enforceable Through Title V Permit

12. The sulfur fuel content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377, or double GC for H2S and mercaptans. If the sulfur fuel content is less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every 6 months. If any six-month monitoring tests result in a sulfur fuel content exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

13. Performance testing shall be conducted annually to measure NOx and CO emissions concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The test will be comprised of three test runs performed at the highest physically achievable load of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, and 6.4] Federally Enforceable Through Title V Permit

14. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. Source testing shall not be required with the duct burner on if it has not been in operation during the previous 12 months, i.e. the duct burner need not be started to solely perform source testing. Source testing shall not be required with the duct burner off if it has been in continuous operation during the previous 12 months, i.e. the duct burner need not be shut-down solely to perform source testing. Source testing shall be performed within 60 days of startup or shutdown of the duct burner unless source testing of the duct burner has been performed in the previous 12 months. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

15. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

16. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in Rule 1081 (as amended 12/16/93), Sections 3.0 and 6.1. [District Rule1081] Federally Enforceable Through Title V Permit

17. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for approval 15 days prior to such testing. [District Rule 1081] Federally Enforceable Through Title V Permit

18. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall develop and keep on-site a parameter monitoring plan which includes the procedures used to document the proper operation of the NOx emissions controls (water injection). This plan shall include the parameter(s) monitored, such as the water-to-fuel ratio, and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturers recommendations and other relevant information shall be included in the monitoring plan. [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

21. The water to fuel ratio shall not be less than 0.45 on a weight basis. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

22. The owner or operator shall submit a semi-annual excess NOx emissions and monitor downtime report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by the 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water-to-fuel ratio, turbine load, nature and cause of excess emissions (if known), and corrective actions taken and preventative measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Excess emissions shall be defined as any operating hour for which the steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into the turbine shall also be considered as excess emissions. [40 CR 60.334(j)(1)(i)(A)] Federally Enforceable Through Title V Permit

24. Monitor downtime shall be any operating hour in which the water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit

25. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The cogeneration system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

30. The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The owner or operator shall maintain a record of the cumulative rolling 12 month fuel usage for each turbine. The record shall be updated at the end of each calendar month. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

35. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (a)(2), 60.333 (b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(b), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 1081(as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, 7.3 and Rule 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-19-13 **EXPIRATION DATE:** 12/31/2005

SECTION: 13D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
DORMANT 58.5 MMBTU/HR SG 13-03 THERMOTICS STEAM GENERATOR, MODEL 5G-50-NDS-15, WITH NORTH AMERICAN GAS BURNER, MODEL 6131G-LO-NOX WITH FLUE GAS RECIRCULATION AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit
4. This unit shall be fired on natural gas, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule]
5. Total gas consumption shall not exceed 1,404 MMBtu/day nor 457,800 MMBtu/year. [District NSR Rule]
6. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule]
7. The flue gas recirculation system shall be operated whenever the generator is in use. [District NSR Rule]
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3]
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1]
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2]
11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2]
12. NOx emissions shall not exceed 30 ppmvd @ 3% excess oxygen or 0.036 lb/MMBtu. [District Rule 2520, 9.3.2 and 4305]
13. CO emissions shall not exceed 50 ppmvd @ 3% excess oxygen or 0.037 lb/MMBtu. [District NSR Rule]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

14. Emissions shall not exceed any of the following limits: 0.157 lb-SO2/MMBtu, 0.022 lb-PM10/MMBtu, 0.003 lb-VOC/MMBtu. [District NSR Rule]
15. This unit, or a representative unit as approved by the District, shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.3.2 and 4305]
16. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.3.2]
17. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.3.2]
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081]
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
20. NOx emissions (ppmv) shall be determined by EPA Method 7E or ARB Method 100; EPA Method 19 for NOx emissions rate (lb/MMBtu). [District Rule 2520, 9.3.2 and 4305]
21. CO emissions (ppmv) shall be determined by EPA Method 10 or ARB Method 100. [District Rule 2520, 9.3.2 and 4305]
22. Stack gas oxygen concentration shall be determined by EPA Method 3 or 3A, or CARB Method 100. [District Rule 2520, 9.3.2 and 4305]
23. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule]
24. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081]
25. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081]
26. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.3.2 and 4305]
27. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.3.2 and 4305]
28. If the NOx or CO concentrations,as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one(1) hour after detection. If portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emission test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.3.2 and 4305]
29. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 3 months prior to the date the stack concentration are measured and recorded. [District Rule 2520, 9.3.2 and 4305]
30. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.3.2 and 4305]
31. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.3.2 and 4305]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.3.2 and 4305]

33. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule]

34. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule]

35. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2]

36. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2]

37. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1]

38. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.3.2, and 4305, 6.3.2]

39. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2]

40. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.3.2 and 4305, 6.3.2]

41. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2]

43. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081]

44. Permittee shall record daily total gas consumption. Records shall be made available for District inspection upon request. [District Rule 1070]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

45. Copies of all , gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2]

46. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

47. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

48. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-20-15 **EXPIRATION DATE:** 12/31/2005

SECTION: 13D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR NATURAL GAS-FIRED STRUTHERS THERMOFLOOD SG 13-04 STEAM GENERATOR WITH A NORTH AMERICAN GLE LOW-NOX BURNER WITH OXYGEN CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired on PUC-quality natural gas, or a blend of PUC-quality natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total gas consumption of this unit shall not exceed either of the following limits: 1,404 MMBtu/day or 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801] Federally Enforceable Through Title V Permit
6. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; and 4305, 6.2.1] Federally Enforceable Through Title V Permit

11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Emissions from the steam generator shall not exceed any of the following limits: 0.157 lb-SOx/MMBtu, 0.004 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Except during start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 15 ppmvd NOx @ 3% O2, equivalent to 0.0182 lb-NOx/MMBtu or 50 ppmvd CO @ 3% O2, equivalent to 0.037 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

14. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

16. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

17. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 8,332 lb-NOx/yr, 51.9 lb-CO/day, or 16,939 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

18. The emission factor (EF) for SOx shall be determined and recorded on a monthly basis by using the following formula: EF = (A + B) x 2.857 / Total, where: A = (the amount (in MMscf) of well casing gas consumed for the month X the sulfur content (in grain/100 scf) as posted in the most recent lab analysis); B = (the amount (in MMscf) of PUC grade natural gas consumed for the month X 0.21; and Total = (the total amount of well casing and PUC grade gas combined consumed (in MMscf) for the month). [District NSR Rule] Federally Enforceable Through Title V Permit

19. 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 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

21. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, and 4306, 6.3.1] Federally Enforceable Through Title V Permit

23. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. 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 2520, 9.3.2, 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

25. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

26. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The source test plan shall indicate which test method shall be used to demonstrate compliance. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The results of each source test shall be submitted to the District within 60 days after the source test. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

29. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

30. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

31. 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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

32. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

33. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

34. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

35. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. When calculating NOx or CO emission limits based on heat input (lb/MMBtu), fuel hhv shall be certified by third party supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

37. The well casing gas shall be sampled monthly from the gas line down stream from the point where the casing gas from all 4 casing collection systems is connected together and upstream from the point where the well casing gas is fed to the steam generators. The gas sample shall be analyzed by the laboratory for total sulfur and the results shall be given in grain/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Permittee shall maintain monthly records of the total amount of well casing gas consumed by the entire bank of steam generators (in MMscf), along with the date and time of the measurement. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Permittee shall maintain monthly records of the total amount of PUC grade gas consumed by the entire bank of steam generators (in MMscf), along with the date and time of the measurement. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. Permittee shall maintain records of daily total gas consumption. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

41. Permittee shall maintain records of all lab analyses. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

42. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

44. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

45. 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, 2520, 9.4.2, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

46. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1081 (Amended December 16, 1993), 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

47. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-21-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14

EQUIPMENT DESCRIPTION:
58.5 MBTU/HR SG 13-5 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GAS AND OIL BURNER.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The natural gas emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. The fuel oil emissions shall not exceed 40 ppm NOx (0.052 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
5. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 6. [District Rule 2201]
6. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
7. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
8. 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]
9. Natural gas consumption shall not exceed 1.34 million scf/day or 436 million scf/year. [District Rule 2201]
10. Fuel oil consumption shall not exceed 9,360 gallons/day nor 2.9 million gallons/year. [District Rule 2201]
11. Combined fuel oil and natural gas consumption shall not exceed 415,000 MMBtu/year. [District Rule 2201]
12. Fuel oil sulfur content shall not exceed 1.5% by weight. [District Rule 2201]
13. Permittee shall record fuel oil and natural gas consumption, and fuel oil sulfur content. Records shall be retained for at least two years and provided to the District upon request. [district Rule 1070]
14. Emissions shall not exceed the following limits: NOx - 73 lbs/day, SOx - 68.2 lbs/hr, CO - 49.2 lbs/day, PM - 112.3 lbs/day, VOC (NMHC) - 97.9 lbs/day. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-22-10 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 13-06 THERMOTICS STEAM GENERATOR, MODEL 5G-50-NDS-15, WITH A NORTH AMERICAN GAS BURNER, MODEL 6131G-CR-67.5 WITH FLUE GAS RECIRCULATION AND O2 CONTROLLER DESIGNATE AS DORMANT EMISSION UNIT(DEU)

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit
2. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072 ,D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. Total gas consumption shall not exceed 1404 MMBtu/day nor 457800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Permittee shall record daily total gas consumption. Records shall be made available for District inspection upon request. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit

21. This unit shall be fired with natural gas or casing gas. [District NSR Rule] Federally Enforceable Through Title V Permit

22. The flue gas recirculation system shall be operated whenever the generator is in use. [District NSR Rule] Federally Enforceable Through Title V Permit

23. NOx emissions shall not exceed 30 ppmvd @ 3% excess oxygen or 0.036 lb/MMBtu. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

24. CO emissions shall not exceed 50 ppmvd @ 3% excess oxygen or 0.037 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

25. Emissions shall not exceed the following limits: 0.157 lb-SO2/MMBtu, 0.022 lb-PM10/MMBtu, 0.003 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. This unit, or a representative unit as approved by the District, shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

28. 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

29. NOx emissions (ppmv) shall be determined by EPA Method 7E or ARB Method 100; EPA Method 19 for NOx emissions rate (lb/MMBtu). [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. CO emissions (ppmv) shall be determined by EPA Method 10 or ARB Method 100. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. Stack gas oxygen concentration shall be determined by EPA Method 3 or 3A, or CARB Method 100. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

33. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081] Federally Enforceable Through Title V Permit

34. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

35. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

36. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

37. If the NOx or CO concentrations,as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one(1) hour after detection. If portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emission test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

38. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentration are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

39. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

40. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

42. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

44. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

45. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

46. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

47. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

48. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

49. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

50. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-23-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 13-07 THERMOTICS STEAM GENERATOR, MODEL 5G-50-NDS-15, WITH A NORTH AMERICAN GAS BURNER, MODEL 6131G-CR-67.5 WITH FLUE GAS RECIRCULATION AND O2 CONTROLLER DESIGNATE AS DORMANT EMISSION UNIT(DEU)

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit
2. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
18. Total gas consumption shall not exceed 1404 MMBtu/day nor 457800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
19. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
20. Permittee shall record daily total gas consumption. Records shall be made available for District inspection upon request. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
21. This unit shall be fired with natural gas and casing gas. [District NSR Rule] Federally Enforceable Through Title V Permit
22. The flue gas recirculation system or the fuel induced recirculation system shall be operated whenever the generator is in use. [District NSR Rule] Federally Enforceable Through Title V Permit
23. NOx emissions shall not exceed 30 ppmvd @ 3% excess oxygen or 0.036 lb/MMBtu. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit
24. CO emissions shall not exceed 50 ppmv @ 3% excess oxygen or 0.037 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
25. Emissions shall not exceed the following limits: 0.157 lb-SO2/MMBtu, 0.022 lb-PM10/MMBtu, 0.003 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. This unit, or a representative unit as approved by the District, shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

28. 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

29. NOx emissions (ppmv) shall be determined by EPA Method 7E or ARB Method 100; EPA Method 19 for NOx emissions rate (lb/MMBtu). [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. CO emissions (ppmv) shall be determined by EPA Method 10 or ARB Method 100. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. Stack gas oxygen concentration shall be determined by EPA Method 3 or 3A, or CARB Method 100. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

33. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081] Federally Enforceable Through Title V Permit

34. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

35. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 1 day of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

36. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

37. If the NOx or CO concentrations,as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one(1) hour after detection. If portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emission test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

38. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentration are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

39. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

40. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

42. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

44. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

45. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

46. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

47. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

48. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

49. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

50. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-25-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 13-9 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN FLUE GAS RECIRCULATION SYSTEM.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. Natural gas consumption shall not exceed 1.34 million scf/day or 414 million scf/year. [District Rule 2201]
8. This unit shall be fired exclusively with natural gas or LPG. [District Rule 2201]
9. LPG consumption shall not exceed 1,404 MMBtu/day nor 435,000 MMBtu/year. [District Rule 2201]
10. The flue gas recirculation system shall be operated whenever the generator is in use. [District Rule 2201]
11. Emissions shall not exceed the following limits: NOx - 50.5 lbs/day, SOx - 73.0 lbs/day, CO - 48.0 lbs/day, PM10 - 63.1 lbs/day, or VOC (NMHC) - 12.0 lbs/day. [District Rule 2201]
12. Emissions shall not exceed the following limits: SOx - 0.052 lbs/MMBtu, or CO - 0.035 lbs/MMBtu. [District Rule 2201]
13. Permittee shall record natural gas and propane consumption. Records shall be retained for at least two years and provided to the District upon request. [District Rule 1070]
14. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. [District Rule 4305]
15. 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]
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-27-13 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #13-11, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE BURNER, EQUIPPED WITH FLUE GAS RECIRCULATION AND AN OXYGEN CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired exclusively with natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Natural gas consumption shall not exceed 1,404 MMBtu/day nor 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in the fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
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 NSR Rule] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
6. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit
7. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
8. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. Emissions from this unit shall not exceed any of the following limits: 0.001 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
11. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 5.85 lb-NOx/hr, 0.06 lb-SOx/hr, 0.29 lb-PM10/hr, 4.91 lb-CO/hr, or 0.18 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit
13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
15. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
16. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
19. 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
20. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306, 6.2.2] Federally Enforceable Through Title V Permit
21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306, 6.2.3] Federally Enforceable Through Title V Permit
22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2.4] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit
24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306, 5.5.4] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

32. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

34. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

36. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

37. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for natural gas used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. Records of daily natural gas fuel consumption shall be maintained and made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

42. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

43. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-28-15 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #13-12, MODEL OH-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION (FGR), AND AN OXYGEN CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Natural gas consumption shall not exceed 1,404 MMBtu/day nor 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in the fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit
6. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. Emissions from this unit shall not exceed any of the following limits: 0.284 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, or 0.008 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
10. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 5.85 lb-NOx/hr, 16.61 lb-SOx/hr, 0.29 lb-PM10/hr, 4.91 lb-CO/hr, or 0.47 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit
12. 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
13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
14. Sampling facilities for source testing shall be provided in accordance with the provisions of rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
15. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit
16. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
19. 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
20. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306, 6.2.2] Federally Enforceable Through Title V Permit
21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306, 6.2.3] Federally Enforceable Through Title V Permit
22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2.4] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306, 5.5.4] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule Rules 2520, 9.3.2; 4305, 6.2.1; 4306; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

32. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

34. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

36. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

37. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Permittee shall record daily natural gas consumption. Records shall be made available for District inspection upon request. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for natural gas used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

41. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-30-15 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #13-14, MODEL OH-50-ND-16XAM, NATURAL GAS FIRED, WITH A NORTH AMERICAN GLE BURNER, AN OXYGEN CONTROLLER, AND A FLUE GAS RECIRCULATION (FGR) SYSTEM

PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. 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 NSR Rule] Federally Enforceable Through Title V Permit
3. Natural gas consumption shall not exceed 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in the fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
6. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit
7. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
8. Emissions from this unit shall not exceed any of the following limits: 0.14 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu [District NSR Rule] Federally Enforceable Through Title V Permit
9. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.37 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
10. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 6.25 lb-NOx/hr, 8.75 lb-SOx/hr, 0.31 lb-PM10/hr, 5.25 lb-CO/hr, or 0.19 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit
13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306,5.5.1] Federally Enforceable Through Title V Permit
15. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
16. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
19. 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
20. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306, 6.2.2] Federally Enforceable Through Title V Permit
21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306, 6.2.3] Federally Enforceable Through Title V Permit
22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2.4] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit
24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306, 5.5.4] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2.1; 4306; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

32. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

34. Permittee shall maintain accurate annual records of natural gas use, and such records shall be made readily available. [District Rule 1070] Federally Enforceable Through Title V Permit

35. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for natural gas used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
38. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-36-14 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
DORMANT 58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR (SG #25-15), MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN 4131-G-LNX BURNER, FLUE GAS RECIRCULATION SYSTEM AND AN OXYGEN CONTROLLER SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS FROM SECTIONS 25D AND 6C ONLY

PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010, 3.0] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306, 5.1.1] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306, 5.1.1] Federally Enforceable Through Title V Permit
4. This unit shall be fueled with natural gas, LPG, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
5. 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 NSR Rule] Federally Enforceable Through Title V Permit
6. Total LPG, casing gas, waste gas, and natural gas consumption shall not exceed 435,000 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The flue gas recirculation system shall be operated whenever the steam generator is in use. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
10. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

15. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Emissions shall not exceed the following limits: NO2 - 0.036 lb/MMBtu, SOx (as SO2) - 0.052 lb/MMBtu, CO - 0.035 lb/MMBtu, PM10 - 0.044 lb MMBtu, or VOC (NMHC) - 0.0085 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

17. This unit shall be tested for compliance with NOx and CO emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District NSR Rule] Federally Enforceable Through Title V Permit

18. 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

19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

20. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, 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 Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3%O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

22. If the NOx or CO concentrations, as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 3 months prior to the date the stack concentrations are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

24. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

25. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

26. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

27. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Source testing shall be performed for NOx (ppmv) according to EPA method 7E (or ARB Method 100) and EPA Method 10 (or ARB Method 100) for CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

31. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

32. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

33. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

34. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

35. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

37. Permittee shall record natural gas, propane, casing gas, and waste gas consumption. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

38. Permittee shall measure and record the BTU content of the gas burned at the time of NOx testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4801] Federally Enforceable Through Title V Permit

39. Permittee shall maintain with the permit a current listing of all TEOR and TVR systems providing vapor to this steam generator and shall make such listing readily available for District inspection upon request [District NSR Rule] Federally Enforceable Through Title V Permit

40. Permittee shall maintain daily records of volume of fuel gas burned, TEOR/TVR gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

41. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-37-20 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR STRUTHERS THERMOFLOOD MODEL OH-50-ND-16XAM STEAM GENERATOR (#25-16) WITH A NORTH AMERICAN MODEL GLE LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS

PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas, LPG, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. 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 NSR Rule] Federally Enforceable Through Title V Permit
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Total gas consumption shall not exceed 1,404 MMBtu/day nor 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Scrubber liquor pH shall be maintained between 6.5 and 8.0. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Tray packing flowrate shall be operated at 700 to 840 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Quench flowrate shall be operated at 145 to 185 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

13. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

16. Except during start-up and shutdown periods, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.052 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.008 lb-VOC/MMBtu. [District Rules 2201, 4301, 4305, and 4306] Federally Enforceable Through Title V Permit

17. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. the operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

20. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 8,240 lb-NOx/year, 85.6 lb-CO/day, or 16,939 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. 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

29. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. 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

34. Sampling facilities for source testing shall be provided in accordance with the provisions of rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

35. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Waste gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

36. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

37. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

38. Permittee shall record daily total gas consumption. Records shall be retained for at least five years and made available for District inspection upon request. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

39. Daily records of the tray packing flowrate and the quench flowrate shall be maintained, retained on the premises for a period of at least five years, and made available for District inspection upon request. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

40. Permittee shall measure and record the BTU content of the gas burned at the time of NOx source testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

42. Permittee shall maintain with the permit a current listing of all TEOR and TVR systems providing vapor to this steam generator and shall make such listing readily available for District inspection upon request [District NSR Rule] Federally Enforceable Through Title V Permit

43. Permittee shall maintain daily records of volume of fuel gas burned, TEOR/TVR gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

44. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

45. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

46. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

47. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-38-19 **EXPIRATION DATE:** 12/31/2005

SECTION: 25D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
DORMANT 58.5 MMBTU/HR SG 25-17 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GAS AND OIL BURNER AND FLUE GAS RECIRCULATION SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS

PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit
4. This unit shall be fueled with natural gas, LPG, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule]
5. Total gas consumption shall not exceed 1404 MMBtu/day nor 457800 MMBtu/year. [District NSR Rule]
6. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule]
7. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule]
8. The flue gas recirculation system shall be operated whenever the generator is in use. [District NSR Rule]
9. Scrubber liquor pH shall be maintained between 6.5 and 8.0. [District NSR Rule]
10. Tray packing flowrate shall be operated at 700 to 840 gallons/minute. [District NSR Rule]
11. Quench flowrate shall be operated at 145 to 185 gallons/minute. [District NSR Rule]
12. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3]
13. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

14. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2]
15. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2]
16. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2]
17. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1]
18. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2]
19. NOx emissions shall not exceed 30 ppmvd @ 3% excess oxygen or 0.036 lb/MMBtu. [District Rule 2520, 9.3.2 and 4305]
20. CO emissions shall not exceed 75 ppmv @ 3% excess oxygen or 0.061 lb/MMBtu. [District NSR Rule]
21. Emissions shall not exceed the following limits: SO2 - 0.052 lb/MMBtu, PM10 - 0.045 lb/MMBtu, nor VOC (NMHC) - 0.008 lb/MMBtu. [District NSR Rule]
22. Compliance source testing for natural gas-fired NOx and CO emission rates shall be conducted within 60 days after start up. [District Rule 2520, 9.3.2 and 4305]
23. This unit, or a representative unit as approved by the District, shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. [District Rule 2520, 9.3.2 and 4305]
24. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.3.2]
25. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.3.2]
26. NOx emissions (ppmv) shall be determined by EPA Method 7E or ARB Method 100; EPA Method 19 for NOx emissions rate (lb/MMBtu). [District Rule 2520, 9.3.2 and 4305]
27. CO emissions (ppmv) shall be determined by EPA Method 10 or ARB Method 100. [District Rule 2520, 9.3.2 and 4305]
28. Stack gas oxygen concentration shall be determined by EPA Method 3 or 3A, or CARB Method 100. [District Rule 2520, 9.3.2 and 4305]
29. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule]
30. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

31. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081]

32. Sampling facilities for source testing shall be provided in accordance with the provisions of rule 1081 (Source Sampling). [District Rule 1081]

33. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, 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 Rule 2520, 9.3.2 and 4305]

34. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.3.2 and 4305]

35. If the NOx or CO concentrations,as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one(1) hour after detection. If portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emission test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.3.2 and 4305]

36. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 3 months prior to the date the stack concentration are measured and recorded. [District Rule 2520, 9.3.2 and 4305]

37. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.3.2 and 4305]

38. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.3.2 and 4305]

39. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.3.2 and 4305]

40. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Waste gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule]

41. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.3.2, and 4305, 6.3.2]

42. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2]

43. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.3.2 and 4305, 6.3.2]

44. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, and 4305, 6.3.2]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

45. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2]
46. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081]
47. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2]
48. Permittee shall record daily total gas consumption. Records shall be retained for at least five years and made available for District inspection upon request. [District Rule 1070 and 2520, 9.3.2]
49. Daily records of the tray packing flowrate and the quench flowrate shall be maintained, retained on the premises for a period of at least five years, and made available for District inspection upon request. [District Rule 1070 and 2520, 9.4.2]
50. Permittee shall measure and record the BTU content of the gas burned at the time of NOx source testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4801]
51. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule]
52. Permittee shall maintain with the permit a current listing of all TEOR and TVR systems providing vapor to this steam generator and shall make such listing readily available for District inspection upon request [District NSR Rule]
53. Permittee shall maintain daily records of volume of fuel gas burned, TEOR/TVR gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule]
54. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
55. Records required by this permit shall be made readily available for District inspection upon request. [District NSR Rule]
56. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
57. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-39-18 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #25-18, MODEL OH-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GLE BURNER AND FLUE GAS RECIRCULATION SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS

PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas, LPG, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total gas consumption shall not exceed 1,404 MMBtu/day nor 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Scrubber liquor pH shall be maintained between 6.5 and 8.0. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Tray packing flowrate shall be operated at 700 to 840 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Quench flowrate shall be operated at 145 to 185 gallons/minute. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Emissions from this unit shall not exceed any of the following limits: 0.0520 lb-SOx/MMBtu, 0.045 lb-PM10/MMBtu, or 0.008 lb-VOC/MMBtu. [District NSR Rule]
11. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306]
12. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 5.85 lb-NOx/hr, 3.04 lb-SOx/hr, 2.63 lb-PM10/hr, 4.91 lb-CO/hr, or 0.47 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

13. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit

14. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

16. 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

17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306, 5.5.1]

18. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

20. Sampling facilities for source testing shall be provided in accordance with the provisions of rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

23. 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

24. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306, 6.2.2] Federally Enforceable Through Title V Permit

25. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306, 6.2.3] Federally Enforceable Through Title V Permit

26. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2.4] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306, 5.5.4] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306, 6.1] Federally Enforceable Through Title V Permit

31. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

32. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. Waste gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

39. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

40. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

41. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

43. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

44. Permittee shall record daily total gas consumption. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

45. Daily records of the tray packing flowrate and the quench flowrate shall be maintained, retained on the premises for a period of at least five years, and made available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

46. Permittee shall measure and record the BTU content of the gas burned at the time of NOx source testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and District Rule 4801] Federally Enforceable Through Title V Permit

47. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

48. Permittee shall maintain with the permit a current listing of all TEOR and TVR systems providing vapor to this steam generator and shall make such listing readily available for District inspection upon request [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

49. Permittee shall maintain daily records of volume of fuel gas burned, TEOR/TVR gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

50. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

51. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

52. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-40-17 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR NATURAL GAS, LPG OR PROCESS GAS FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION SYSTEM, AN OXYGEN CONTROLLER, SERVED BY THE NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS (COMMON TO C-311-37) (SG-25-19)

PERMIT UNIT REQUIREMENTS

1. This unit shall be fueled with natural gas, LPG, or a blend of natural gas and well casing and tank vapor recovery (TVR) gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Fuel consumption shall not exceed 434,700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
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 NSR Rule] Federally Enforceable Through Title V Permit
4. The permittee shall maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule]
6. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. Emissions from this unit shall not exceed any of the following limits: 0.052 lb-SOx/MMBtu, 0.045 lb-PM10/MMBtu, or 0.0055 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
10. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 5.85 lb-NOx/hr, 3.04 lb-SOx/hr, 2.63 lb-PM10/hr, 4.91 lb-CO/hr, or 0.32 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

13. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

16. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

19. 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

20. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306, 6.2.2] Federally Enforceable Through Title V Permit

21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306, 6.2.3] Federally Enforceable Through Title V Permit

22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2.4] Federally Enforceable Through Title V Permit

23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306, 5.5.4] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

29. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

30. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

33. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

34. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

36. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

37. Copies of all gas purchase contracts, supplier certifications, and test results (including fuel hhv) to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

39. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

40. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-41-14 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-20 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE BURNER AND FLUE GAS RECIRCULATION SYSTEM, SERVED BY THE NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS

PERMIT UNIT REQUIREMENTS

1. Total LPG, casing gas, waste gas, and natural gas consumption shall not exceed 435,000 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The caustic scrubber shall be operated to control SOx emissions when ever the steam generator is fueled with well casing and/or TVR gas. [District NSR Rule]
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 NSR Rule] Federally Enforceable Through Title V Permit
4. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Emissions from this unit shall not exceed any of the following limits: 0.052 lb-SOx/MMBtu, 0.044 lb-PM10/MMBtu, or 0.0085 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Except during startup and shutdown, emissions from this unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, or 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu. [District NSR Rule and District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
7. During startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 5.85 lb-NOx/hr, 3.04 lb-SOx/hr, 2.57 lb-PM10/hr, 4.91 lb-CO/hr, or 0.50 lb-VOC/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Duration of startup and shutdown shall not exceed two hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rule 4306, 5.3.1] Federally Enforceable Through Title V Permit
9. Startup is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
10. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. 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
13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
14. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] 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 and 4306, 5.5.2] 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 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
17. 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
18. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306, 6.2.2] Federally Enforceable Through Title V Permit
19. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306, 6.2.3] Federally Enforceable Through Title V Permit
20. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2.4] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306, 5.4.2] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, and 4306, 5.5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

26. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

27. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

28. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

29. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

31. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

32. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

33. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

34. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4306, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

35. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. Copies of all gas purchase contracts, supplier certifications, and test results (including fuel hhv) to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit

37. Permittee shall record natural gas, propane, casing gas and waste gas consumption. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. Permittee shall measure and record the BTU content of the gas burned at the time of NOx testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and District Rule 4801] Federally Enforceable Through Title V Permit

39. Permittee shall maintain with the permit a current listing of all TEOR and TVR systems providing vapor to this steam generator and shall make such listing readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Permittee shall maintain daily records of volume of fuel gas burned, TEOR/TVR gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

41. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-42-11 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-21 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GAS BURNER, MODEL 4132-G-LNX WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit
2. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
18. 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 NSR Rule] Federally Enforceable Through Title V Permit
19. The flue gas recirculation system shall be operated in accordance with the manufacturer's directions whenever the steam generator is operating. [District NSR Rule] Federally Enforceable Through Title V Permit
20. This unit shall be fired exclusively with natural gas or LPG. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Natural gas or LPG consumption shall not exceed 1404 MMBtu/day nor 434,700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
22. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Emissions shall not exceed any of the following limits: NOx - 0.036 lb/MMBtu, SOx - 0.052 lb/MMBtu, CO - 0.035 lb/MMBtu, and PM-10 - 0.045 lb/MMBtu. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
24. Emissions shall not exceed any of the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, CO - 49.0 lb/day, and PM10 - 63.12 lb/day. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
25. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. 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

27. 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

28. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. If the NOx or CO concentrations, as measured by the portable emissions analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentrations are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

33. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

34. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. Permittee shall record daily natural gas and propane consumption. Records shall be provided to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

36. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source; or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

38. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. Source testing shall be performed for NOx (ppmv) according to EPA method 7E (or ARB Method 100) and EPA Method 10 (or ARB Method 100) for CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

43. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-43-10 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-22 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16AXM, WITH A NORTH AMERICAN 4131-6-LNX BURNER WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit
2. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
18. 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 NSR Rule] Federally Enforceable Through Title V Permit
19. The flue gas recirculation system shall be operated in accordance with the manufacturer's directions whenever the steam generator is operating. [District NSR Rule] Federally Enforceable Through Title V Permit
20. This unit shall be fired exclusively with natural gas or LPG. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Natural gas or LPG consumption shall not exceed 1404 MMBtu/day nor 434,700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
22. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Emissions shall not exceed any of the following limits: NOx - 0.036 lb/MMBtu, SOx - 0.052 lb/MMBtu, CO - 0.035 lb/MMBtu, and PM-10 - 0.045 lb/MMBtu. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
24. Emissions shall not exceed any of the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, CO - 49.0 lb/day, and PM10 - 63.12 lb/day. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
25. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. 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

27. 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

28. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. If the NOx or CO concentrations, as measured by the portable emissions analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentrations are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

33. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

34. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. Permittee shall record daily natural gas and propane consumption. Records shall be provided to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

36. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source; or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

38. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. Source testing shall be performed for NOx (ppmv) according to EPA method 7E (or ARB Method 100) and EPA Method 10 (or ARB Method 100) for CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

43. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-45-10 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-24 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16AXM, WITH A NORTH AMERICAN 4131-G-LNX BURNER WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
2. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 4 below. [District Rule 2010]
3. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
4. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
5. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201]
6. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
7. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
9. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
10. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

15. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

19. 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 NSR Rule] Federally Enforceable Through Title V Permit

20. The flue gas recirculation system shall be operated in accordance with the manufacturer's directions whenever the steam generator is operating. [District NSR Rule] Federally Enforceable Through Title V Permit

21. This unit shall be fired exclusively with natural gas or LPG. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Natural gas or LPG consumption shall not exceed 1404 MMBtu/day nor 434,700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit

23. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Emissions shall not exceed any of the following limits: NOx - 0.036 lb/MMBtu, SOx - 0.052 lb/MMBtu, CO - 0.035 lb/MMBtu, and PM-10 - 0.045 lb/MMBtu. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

25. Emissions shall not exceed any of the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, CO - 49.0 lb/day, and PM10 - 63.12 lb/day. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit

26. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

27. 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

28. 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

29. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. If the NOx or CO concentrations, as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentrations are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

33. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

34. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

36. Permittee shall record daily natural gas and propane consumption. Records shall be provided to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source; or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. Source testing shall be performed for NOx (ppmv) according to EPA method 7E (or ARB Method 100) and EPA Method 10 (or ARB Method 100) for CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

42. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

43. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

46. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-46-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-25 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN 4131-G-LNX BURNER WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit
2. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. 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 NSR Rule] Federally Enforceable Through Title V Permit

19. The flue gas recirculation system shall be operated in accordance with the manufacturer's directions whenever the steam generator is operating. [District NSR Rule] Federally Enforceable Through Title V Permit

20. This unit shall be fired exclusively with natural gas or LPG. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Natural gas or LPG consumption shall not exceed 1404 MMBtu/day nor 434,700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit

22. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Emissions shall not exceed any of the following limits: NOx - 0.036 lb/MMBtu, SOx - 0.052 lb/MMBtu, CO - 0.035 lb/MMBtu, and PM-10 - 0.045 lb/MMBtu. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit

24. Emissions shall not exceed any of the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, CO - 49.0 lb/day, and PM10 - 63.12 lb/day. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit

25. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. 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

27. 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

28. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. If the NOx or CO concentrations, as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentrations are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

33. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

34. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. Permittee shall record daily natural gas and propane consumption. Records shall be provided to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

36. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source; or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

38. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. Source testing shall be performed for NOx (ppmv) according to EPA method 7E (or ARB Method 100) and EPA Method 10 (or ARB Method 100) for CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

43. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-47-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-26 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16-XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131-G-LNX, AND A FLUE GAS RECIRCULATION SYSTEM.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. Natural gas consumption shall not exceed 1.34 million scf/day or 414 million scf/year. [District Rule 2201]
8. This unit shall be fired exclusively with natural gas or LPG. [District Rule 2201]
9. LPG consumption shall not exceed 1,404 MMBtu/day nor 435,000 MMBtu/year. [District Rule 2201]
10. The flue gas recirculation system shall be operated whenever the generator is in use. [District Rule 2201]
11. Emissions shall not exceed the following limits: CO - 0.034 lb/MMBtu, SOx - 0.052 lb/MMBtu, or PM-10 - 0.045 lb/MMBtu. [District Rule 2201]
12. Emissions shall not exceed the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, or PM10 - 63.12 lb/day. [District Rule 2201]
13. Permittee shall record natural gas and propane consumption. Records shall be retained for at least two years and provided to the District upon request. [District Rule 1070]
14. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. [District Rule 4305]
15. 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]
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-48-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-27 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131, AND A FLUE GAS RECIRCULATION SYSTEM.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. Natural gas consumption shall not exceed 1.34 million scf/day or 414 million scf/year. [District Rule 2201]
8. This unit shall be fired exclusively with natural gas or LPG. [District Rule 2201]
9. LPG consumption shall not exceed 1,404 MMBtu/day nor 435,000 MMBtu/year. [District Rule 2201]
10. The flue gas recirculation system shall be operated whenever the generator is in use. [District Rule 2201]
11. Emissions shall not exceed the following limits: CO - 0.034 lb/MMBtu, SOx - 0.052 lb/MMBtu, or PM-10 - 0.045 lb/MMBtu. [District Rule 2201]
12. Emissions shall not exceed the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, or PM10 - 63.12 lb/day. [District Rule 2201]
13. Permittee shall record natural gas and propane consumption. Records shall be retained for at least two years and provided to the District upon request. [District Rule 1070]
14. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. [District Rule 4305]
15. 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]
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-49-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-28 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131-G-LNX, AND A FLUE GAS RECIRCULATION SYSTEM.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. Natural gas consumption shall not exceed 1.34 million scf/day or 414 million scf/year. [District Rule 2201]
8. This unit shall be fired exclusively with natural gas or LPG. [District Rule 2201]
9. LPG consumption shall not exceed 1,404 MMBtu/day nor 435,000 MMBtu/year. [District Rule 2201]
10. The flue gas recirculation system shall be operated whenever the generator is in use. [District Rule 2201]
11. Emissions shall not exceed the following limits: CO - 0.034 lb/MMBtu, SOx - 0.052 lb/MMBtu, or PM-10 - 0.045 lb/MMBtu. [District Rule 2201]
12. Emissions shall not exceed the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, or PM10 - 63.12 lb/day. [District Rule 2201]
13. Permittee shall record natural gas and propane consumption. Records shall be retained for at least two years and provided to the District upon request. [District Rule 1070]
14. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. [District Rule 4305]
15. 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]
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-50-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 25-29 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-DN-16XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131-G-LNX, AND A GAS RECIRCULATION SYSTEM.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. Natural gas consumption shall not exceed 1.34 million scf/day or 414 million scf/year. [District Rule 2201]
8. This unit shall be fired exclusively with natural gas or LPG. [District Rule 2201]
9. LPG consumption shall not exceed 1,404 MMBtu/day nor 435,000 MMBtu/year. [District Rule 2201]
10. The flue gas recirculation system shall be operated whenever the generator is in use. [District Rule 2201]
11. Emissions shall not exceed the following limits: CO - 0.034 lb/MMBtu, SOx - 0.052 lb/MMBtu, or PM-10 - 0.045 lb/MMBtu. [District Rule 2201]
12. Emissions shall not exceed the following limits: NOx - 50.5 lb/day, SOx - 72.96 lb/day, or PM10 - 63.12 lb/day. [District Rule 2201]
13. Permittee shall record natural gas and propane consumption. Records shall be retained for at least two years and provided to the District upon request. [District Rule 1070]
14. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. [District Rule 4305]
15. 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]
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-51-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG 6-31 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN 4131-G-LNX BURNER WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit
2. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calender days prior to recommencing operation of a compliant DEU. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
18. 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 NSR Rule] Federally Enforceable Through Title V Permit
19. The flue gas recirculation system shall be operated in accordance with the manufacturer's directions whenever the steam generator is operating. [District NSR Rule] Federally Enforceable Through Title V Permit
20. This unit shall be fired exclusively with natural gas or LPG. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Natural gas or LPG consumption shall not exceed 1404 MMBtu/day nor 434700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
22. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Emissions shall not exceed any of the following limits: NO2 - 50.5 lb/day, SO2 - 4.56 lb/day, PM10 - 9.48 lb/day, CO - 48.0 lb/day, and VOC (NMHC) - 12.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
24. Emissions shall not exceed any of the following limits: NO2 - 0.036 lb/MMBtu, SO2 - 0.003 lb/MMBtu, VOC - 0.003 lb/MMBtu, and CO - 0.035 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
25. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. Source testing shall not be required if the unit did not operate during the previous 12 month period. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. 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

27. 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

28. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

30. If the NOx or CO concentrations, as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

31. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 6 months prior to the date the stack concentrations are measured and recorded. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

32. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

33. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

34. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. Permittee shall record daily natural gas and propane consumption. Records shall be provided to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

36. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source; or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

38. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. Source testing shall be performed for NOx (ppmv) according to EPA method 7E (or ARB Method 100) and EPA Method 10 (or ARB Method 100) for CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

43. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-52-17 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR SG STRUTHERS THERMOFLOOD STEAM GENERATOR #6-32, MODEL 0H-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GLE LOW-NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND AN OXYGEN CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired exclusively with natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total gas consumption of this unit shall not exceed either of the following limits: 1,404 MMBtu/day or 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall maintain a non-resettable, totalizing mass or volumetric flow meter in the fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801] Federally Enforceable Through Title V Permit
6. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Emissions from the steam generator shall not exceed any of the following limits: 0.140 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, or 0.008 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Except during start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 15 ppmvd NOx @ 3% O2, equivalent to 0.0182 lb-NOx/MMBtu or 50 ppmvd CO @ 3% O2, equivalent to 0.037 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

14. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

16. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

17. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 8,332 lb-NOx/yr, 51.9 lb-CO/day, or 16,939 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, and 4306, 6.3.1] Federally Enforceable Through Title V Permit

19. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. 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 2520, 9.3.2, 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

21. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

22. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The source test plan shall indicate which test method shall be used to demonstrate compliance. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

25. 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 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

28. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

29. Sampling facilities for source testing shall be provided in accordance with the provisions of rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

31. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

32. 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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

33. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

34. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

37. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for natural gas used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Permittee shall maintain records of daily natural gas consumption. [District Rule 1070] Federally Enforceable Through Title V Permit

41. 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, 2520, 9.4.2, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1081 (Amended December 16, 1993), 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-53-18 **EXPIRATION DATE:** 12/31/2005

SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #6-33, MODEL OH-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GLE LOW-NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND AN OXYGEN CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired exclusively with natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total gas consumption of this unit shall not exceed either of the following limits: 1,404 MMBtu/day or 457,800 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall maintain a non-resettable, totalizing mass or volumetric flow meter in the fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801] Federally Enforceable Through Title V Permit
6. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Emissions from the steam generator shall not exceed any of the following limits: 0.140 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, or 0.008 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Except during start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 15 ppmvd NOx @ 3% O2, equivalent to 0.0182 lb-NOx/MMBtu or 50 ppmvd CO @ 3% O2, equivalent to 0.037 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

14. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

16. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

17. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 50.5 lb-NOx/day, 8,332 lb-NOx/yr, 51.9 lb-CO/day, or 16,939 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, and 4306, 6.3.1] Federally Enforceable Through Title V Permit

19. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. 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 2520, 9.3.2, 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

21. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

22. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The source test plan shall indicate which test method shall be used to demonstrate compliance. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

25. 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 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2520, 9.3.2, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

28. Stack gas moisture content shall be determined using EPA Method 4. [District NSR Rule] Federally Enforceable Through Title V Permit

29. Sampling facilities for source testing shall be provided in accordance with the provisions of rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

31. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

32. 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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

33. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit

34. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

35. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit

37. Natural gas sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas shall be tested for sulfur content and higher heating value (hhv) monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for natural gas used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Permittee shall maintain records of daily natural gas consumption. [District Rule 1070] Federally Enforceable Through Title V Permit

41. 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, 2520, 9.4.2, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1081 (Amended December 16, 1993), 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-76-11 **EXPIRATION DATE:** 12/31/2005

SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
DORMANT 58.5 MMBTU/HR SG 6-38 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN 4131-G-LNX BURNER, AND FLUE GAS RECIRCULATION SYSTEM INCLUDING AN OXYGEN CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit
4. This unit shall be fired exclusively with natural gas, LPG, or casing gas. [District NSR Rule]
5. Natural gas, LPG, or casing gas consumption shall not exceed 1404 MMBtu/day nor 434700 MMBtu/year. [District NSR Rule]
6. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule]
7. 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 NSR Rule]
8. The flue gas recirculation system shall be operated in accordance with the manufacturer's directions whenever the steam generator is operating. [District NSR Rule]
9. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3]
10. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1]
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2]
13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2]
14. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1]
15. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2]
16. Emissions shall not exceed any of the following limits: NOx - 50.5 lb/day, SO2 - 196.56 lb/day, PM10 - 9.48 lb/day, CO - 48.0 lb/day, and VOC (NMHC) - 12.0 lb/day. [District NSR Rule]
17. Emissions shall not exceed any of the following limits: NOx - 0.036 lb/MMBtu, SO2 - 0.140 lb/MMBtu, and CO - 0.035 lb/MMBtu. [District NSR Rule]
18. This unit shall be tested for compliance with NOx emissions limit not less than once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District NSR Rule]
19. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.3.2]
20. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.3.2]
21. 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]
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
23. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. Monitoring shall not be required if the unit is not in operation during any given month, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the steam generator unless monitoring has been performed within the last month. [District Rule 2520, 9.3.2 and 4305]
24. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range and shall identify the months of non-operation for any unit to validate extended monitoring frequencies. [District Rule 2520, 9.3.2 and 4305]
25. If the NOx or CO concentrations, as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits. [District Rule 2520, 9.3.2 and 4305]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. The portable analyzer shall be calibrated as recommended by the manufacturer. All instrument calibration data shall be kept on file including the date of calibration. The calibration date shall not exceed 3 months prior to the date the stack concentrations are measured and recorded. [District Rule 2520, 9.3.2 and 4305]

27. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate. [District Rule 2520, 9.3.2 and 4305]

28. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. [District Rule 2520, 9.3.2 and 4305]

29. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements. [District Rule 2520, 9.3.2 and 4305]

30. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

31. Source testing shall be performed for NOx (ppmv) according to EPA method 7E (or ARB Method 100) and EPA Method 10 (or ARB Method 100) for CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. Annual test results to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.3.2, and 4305, 6.3.2]

33. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2]

34. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.3.2 and 4305, 6.3.2]

35. All units in a group for which representative units are source tested for NOx emissions for this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, and 4305, 6.3.2]

36. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2]

37. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081]

38. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2]

39. Permittee shall record daily natural gas, casing gas, and propane consumption. Records shall be provided to the District upon request. [District NSR Rule]

40. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-77-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 91 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-2-13D WITH LOW PRESSURE SCRUBBER-SEPARATOR, AIR COOLER AND CONDENSATE COLLECTOR.

PERMIT UNIT REQUIREMENTS

1. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended January 15, 1998). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
2. The operator shall maintain monitoring records of the date and well identification where steam injection or well steam stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
4. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit
5. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed 8 at any time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
6. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
7. Operator shall repair each leak within 15 calendar days of detection. The APCO may grant a 10 calendar day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
8. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit
9. VOC content shall be determined using the latest revision of ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
10. The source shall perform leak inspections at least 20% of the wells connected to the system annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
12. Compliance with permit conditions in the Title V permit shall be deemed in compliance with SJVUAPCD Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
13. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
14. Operation of the low pressure scrubber-separator and the air cooler is optional. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Collected vapors shall be incinerated in steam generators approved by the District for TEOR gas incineration. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
16. VOC emissions shall not exceed 2.237 lb/day per well. [District NSR Rule] Federally Enforceable Through Title V Permit
17. Permittee shall maintain a current roster of all wells connected to this system. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-78-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 149 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-4-13D WITH SCRUBBER, FIN-FAN AIR COOLER AND CONDENSATE COLLECTOR.

PERMIT UNIT REQUIREMENTS

1. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended January 15, 1998). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
2. The operator shall maintain monitoring records of the date and well identification where steam injection or well steam stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
4. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit
5. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed 10 at any time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
6. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
7. Operator shall repair each leak within 15 calendar days of detection. The APCO may grant a 10 calendar day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
8. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit
9. VOC content shall be determined using the latest revision of ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
10. The source shall perform leak inspections at least 20% of the wells connected to the system annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
12. Compliance with permit conditions in the Title V permit shall be deemed in compliance with SJVUAPCD Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
13. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
14. Operation of the fin-fan air cooler is optional. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Collected vapors shall be incinerated in steam generators approved by the District for TEOR gas incineration. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
16. VOC emissions shall not exceed 2.237 lb/day per well. [District NSR Rule] Federally Enforceable Through Title V Permit
17. Permittee shall maintain a current roster of all wells connected to this system. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-79-15 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TEOR OPERATION #CC-1-25D SERVING 391 STEAM DRIVE WELLS WITH TWO 100 HP COMPRESSORS, SEPARATOR, CONDENSATE COLLECTOR AND PIPING FROM TEOR OPERATION #6C-CC-1 (C-311-112) AND PRESSURE VESSEL C-311-240

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of the gas in the casing collection system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct and keep records of quarterly sampling of gas handled by the 25D casing collection system to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. Samples shall be taken from knockout vessel V1 or immediately downstream from vessel V1. If fluids sampled are less than 10% VOC by weight for eight consecutive quarterly samplings, sampling frequency shall only be required annually. Such sampling is deemed representative of the wells connected to the CC-1-25D casing collection system. [District Rule 2201] Federally Enforceable Through Title V Permit
3. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
4. The annual inspection requirements of Section 5.8.1 through Section 5.8.5 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10 wt %) or less, as determined by the test methods in Section 6.3.5 of Rule 4401. [District Rule 4401 4.9] Federally Enforceable Through Title V Permit
5. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401 3.20] Federally Enforceable Through Title V Permit
6. 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] 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 5.8 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. 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] Federally Enforceable Through Title V Permit

9. 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] Federally Enforceable Through Title V Permit

10. 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] Federally Enforceable Through Title V Permit

11. 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] Federally Enforceable Through Title V Permit

12. In addition to the inspections required by Section 5.8.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of Rule 4401. [District Rule 4401 5.8.3] Federally Enforceable Through Title V Permit

13. In addition to the inspections required by Sections 5.8.1, 5.8.2 and 5.8.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.8.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401 5.8.4] Federally Enforceable Through Title V Permit

14. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401 5.8.5] Federally Enforceable Through Title V Permit

15. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401 5.8.6] Federally Enforceable Through Title V Permit

16. 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] Federally Enforceable Through Title V Permit

17. 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] Federally Enforceable Through Title V Permit

18. 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. 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] Federally Enforceable Through Title V Permit

20. 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] Federally Enforceable Through Title V Permit

21. 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] Federally Enforceable Through Title V Permit

22. 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] Federally Enforceable Through Title V Permit

23. 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] Federally Enforceable Through Title V Permit

24. 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] Federally Enforceable Through Title V Permit

25. 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 of Rule 4401. [District Rule 4401 6.1.3] Federally Enforceable Through Title V Permit

26. The results of source tests conducted pursuant to Section 4.6.2 of Rule 4401 shall be submitted to the APCO within 60 days after the completion of the source test. [District Rule 4401 6.1.4] Federally Enforceable Through Title V Permit

27. 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. 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] Federally Enforceable Through Title V Permit

30. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401 6.1.8] Federally Enforceable Through Title V Permit

31. 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] Federally Enforceable Through Title V Permit

32. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401 6.2.2] Federally Enforceable Through Title V Permit

34. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 for a vapor control system which does not have a VOC destruction device. [District Rule 4401 6.2.3] Federally Enforceable Through Title V Permit

35. An operator seeking approval pursuant to Section 6.2.2 or Section 6.2.3 shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401 6.2.4] Federally Enforceable Through Title V Permit

36. 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 not later than June 14, 2007. 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] Federally Enforceable Through Title V Permit

37. 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] Federally Enforceable Through Title V Permit

38. 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] Federally Enforceable Through Title V Permit

39. 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] Federally Enforceable Through Title V Permit

40. 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. 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, the 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] Federally Enforceable Through Title V Permit

42. The operator shall inspect at least 20% of the wells each calendar year, using a portable hydrocarbon detection instrument in accordance with US EPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

43. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Compliance with permit conditions in the Title V permit shall be deemed in compliance with SJVUAPCD Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

45. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

46. Operation of the 100 hp compressors is optional. [District Rule 2201] Federally Enforceable Through Title V Permit

47. Collected vapors shall be incinerated in steam generators C-311-19, '-20, '-21, '-22, '-23, '-25, '-28, '-30, '-36, '-37, '-38, '-39, '-40, '-41, '-76, and '-84 or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit

48. Records of the VOC content of the gas handled by the 25D casing collection system shall be maintained and made readily available for District inspection upon request for a period of 5 years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

49. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-83-15 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20 **RANGE:** 14

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 396 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-3-13D WITH SCRUBBER, FIN-FAN AIR COOLER, COMPRESSOR, AND CONDENSATE COLLECTOR (SOUTHWEST)

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of the gas in the casing collection system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct and keep records of quarterly sampling of gas handled by the 13D casing collection system to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. Samples shall be taken from knockout vessel V1 or immediately downstream from vessel V1. If fluids sampled are less than 10% VOC by weight for eight consecutive quarterly samplings, sampling shall only be required annually. If a test shows noncompliance with the percent VOC requirement, the source must return to quarterly testing until eight consecutive quarters show compliance. Such sampling is deemed representative of the wells connected to the CC-3-13D casing collection system. [District Rule 2201] Federally Enforceable Through Title V Permit
3. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
4. The annual inspection requirements of Section 5.8.1 through Section 5.8.5 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10 wt %) or less, as determined by the test methods in Section 6.3.5 of Rule 4401. [District Rule 4401 4.9] Federally Enforceable Through Title V Permit
5. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401 3.20] Federally Enforceable Through Title V Permit
6. 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] 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 5.8 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. 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] Federally Enforceable Through Title V Permit

9. 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] Federally Enforceable Through Title V Permit

10. 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] Federally Enforceable Through Title V Permit

11. 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] Federally Enforceable Through Title V Permit

12. In addition to the inspections required by Section 5.8.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of Rule 4401. [District Rule 4401 5.8.3] Federally Enforceable Through Title V Permit

13. In addition to the inspections required by Sections 5.8.1, 5.8.2 and 5.8.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.8.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401 5.8.4] Federally Enforceable Through Title V Permit

14. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401 5.8.5] Federally Enforceable Through Title V Permit

15. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401 5.8.6] Federally Enforceable Through Title V Permit

16. 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] Federally Enforceable Through Title V Permit

17. 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] Federally Enforceable Through Title V Permit

18. 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. 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] Federally Enforceable Through Title V Permit

20. 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] Federally Enforceable Through Title V Permit

21. 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] Federally Enforceable Through Title V Permit

22. 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] Federally Enforceable Through Title V Permit

23. 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] Federally Enforceable Through Title V Permit

24. 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] Federally Enforceable Through Title V Permit

25. 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 of Rule 4401. [District Rule 4401 6.1.3] Federally Enforceable Through Title V Permit

26. The results of source tests conducted pursuant to Section 4.6.2 of Rule 4401 shall be submitted to the APCO within 60 days after the completion of the source test. [District Rule 4401 6.1.4] Federally Enforceable Through Title V Permit

27. 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. 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] Federally Enforceable Through Title V Permit

30. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401 6.1.8] Federally Enforceable Through Title V Permit

31. 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] Federally Enforceable Through Title V Permit

32. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401 6.2.2] Federally Enforceable Through Title V Permit

34. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 for a vapor control system which does not have a VOC destruction device. [District Rule 4401 6.2.3] Federally Enforceable Through Title V Permit

35. An operator seeking approval pursuant to Section 6.2.2 or Section 6.2.3 shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401 6.2.4] Federally Enforceable Through Title V Permit

36. 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 not later than June 14, 2007. 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] Federally Enforceable Through Title V Permit

37. 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] Federally Enforceable Through Title V Permit

38. 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] Federally Enforceable Through Title V Permit

39. 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] Federally Enforceable Through Title V Permit

40. 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. 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, the 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] Federally Enforceable Through Title V Permit

42. The operator shall inspect at least 20% of the wells each calendar year, using a portable hydrocarbon detection instrument in accordance with US EPA Method 21. [District Rules 2520, 9.3.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

43. Collected vapors shall be incinerated in steam generators C-311-19, '-20, '-21, '-22, '-23, '-25, '-28, '-30, '-36, '-37, '-38, '-39, '-40, '-41, '-76, and '-84 or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District Rules 2201 and 4401]

44. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

45. Operation of the fin-fan air cooler is optional. [District NSR Rule] Federally Enforceable Through Title V Permit

46. Operation of the compressor is optional. [District Rule 2201] Federally Enforceable Through Title V Permit

47. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4401, 6.1] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-84-14 **EXPIRATION DATE:** 12/31/2005

SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
58.5 MMBTU/HR STRUTHERS THERMOFLOOD (SG 6-37) MODELOH5O-ND-16XAM NATURAL GAS/LPG/TEOR GAS (COMMON TO C-311-37, SG 25-19) FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL MAGNA FLAME GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired exclusively with natural gas, LPG, or TEOR gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Total fuel consumption shall not exceed 1,404 MMBtu/day nor 434,700 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The permittee shall install and maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
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 NSR Rule] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
6. Emissions of sulfur compounds from this unit shall not exceed 200 lb/hr, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. Except during start-up and shutdown, emissions from this steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.043 lb-SOx/MMBtu, 0.00675 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.00855 lb-VOC/MMBtu. [District NSR Rule and District Rule 4306, 5.1] Federally Enforceable Through Title V Permit

12. During start-up and shutdown, emissions from this steam generator shall not exceed any of the following limits: 0.1 lb-NOx/MMBtu, 0.043 lb-SOx/MMBtu, 0.00675 lb-PM10/MMBtu, 0.084 lb-CO/MMBtu, or 0.00855 lb-VOC/MMBtu. [District NSR Rule and District Rule 4306, 5.1] Federally Enforceable Through Title V Permit

13. Maximum emissions from this steam generator, including start-up and shutdown operation, shall not exceed any of the following limits: 50.5 lb-NOx in any one day, 7,825 lb-NOx in any calendar year, 66.4 lb-CO in any one day, or 16,084 lb-CO in any calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Start-up is defined as that period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as that period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.22, 3.25] Federally Enforceable Through Title V Permit

15. The duration of each start-up or each shutdown shall not exceed two hours per occurrence. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown. The operator shall maintain daily records of the number and duration of start-up and shutdown periods. [District Rule 4306, 5.3] Federally Enforceable Through Title V Permit

16. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306, 6.3] Federally Enforceable Through Title V Permit

17. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

18. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

20. 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, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

21. 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, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. The results of each source test shall be submitted to the District within 60 days after completion of the test. [District Rule 1081] Federally Enforceable Through Title V Permit

24. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

28. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

29. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

30. 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, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

31. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (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, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

32. Natural gas or LPG sulfur content and higher heating value (hhv) shall be certified by a third party fuel supplier of each fuel source; or natural gas or LPG shall be tested for sulfur content and higher heating value (hhv) monthly. Casing gas shall be tested for sulfur content and higher heating value (hhv) not less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Permittee shall record daily natural gas, casing gas, and propane consumption. Records shall be provided to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

34. Permittee shall maintain records of higher heating value (hhv), in MMBtu/scf, for each gaseous fuel used in this operation. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

35. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. 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, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of District Rules 1081 (Amended December 16, 1993), 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

38. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-88-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-104, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-204, WITH A 36.4 MMBTU/HR COEN DUCT BURNER

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption by the cogeneration system (turbine and duct burner) shall not exceed 1,812,000 scf/day. Natural gas consumption by the cogeneration system shall not exceed 654 million scf/year. [District Rule 2201]
4. Emissions from the cogeneration system shall not exceed any of the following limits: 233.7 lb-NOx/day, 3.6 lb-SOx/day, 47.1 lb-PM10/day, 257.3 lb-CO/day, or 47.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration exceeding 35 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 and 4703, 5.1.2.1] Federally Enforceable Through Title V Permit
6. CO emissions from the cogeneration system with the duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb-CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. CO emissions from the cogeneration system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
8. Emissions from the cogeneration system (with or without duct burner firing) shall not exceed any of the following limits: 0.002 lb-SOx/MMBtu, 0.026 lb-PM10/MMBtu, or 0.026 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Reduced Load Period shall be defined as the time during which the gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate, not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit
10. Thermal Stabilization Period shall be defined as the startup or shutdown, as defined in 40 CFR 60.2, time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per startup or shutdown event. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) and the natural gas shall have a total sulfur content less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b) and District Rules 2201 and 4201] Federally Enforceable Through Title V Permit

12. The sulfur fuel content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377, or double GC for H2S and mercaptans. If the sulfur fuel content is less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every 6 months. If any six-month monitoring tests result in a sulfur fuel content exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

13. Performance testing shall be conducted annually to measure NOx and CO emissions concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The test will be comprised of three test runs performed at the highest physically achievable load of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, and 6.4] Federally Enforceable Through Title V Permit

14. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. Source testing shall not be required with the duct burner on if it has not been in operation during the previous 12 months, i.e. the duct burner need not be started to solely perform source testing. Source testing shall not be required with the duct burner off if it has been in continuous operation during the previous 12 months, i.e. the duct burner need not be shut-down solely to perform source testing. Source testing shall be performed within 60 days of startup or shutdown of the duct burner unless source testing of the duct burner has been performed in the previous 12 months. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

15. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

16. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in Rule 1081 (as amended 12/16/93), Sections 3.0 and 6.1. [District Rule1081] Federally Enforceable Through Title V Permit

17. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for approval 15 days prior to such testing. [District Rule 1081] Federally Enforceable Through Title V Permit

18. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall develop and keep on-site a parameter monitoring plan which includes the procedures used to document the proper operation of the NOx emissions controls (water injection). This plan shall include the parameter(s) monitored, such as the water-to-fuel ratio, and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturers recommendations and other relevant information shall be included in the monitoring plan. [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

21. The water to fuel ratio shall not be less than 0.45 on a weight basis. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

22. The owner or operator shall submit a semi-annual excess NOx emissions and monitor downtime report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by the 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water-to-fuel ratio, turbine load, nature and cause of excess emissions (if known), and corrective actions taken and preventative measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Excess emissions shall be defined as any operating hour for which the steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into the turbine shall also be considered as excess emissions. [40 CR 60.334(j)(1)(i)(A)] Federally Enforceable Through Title V Permit

24. Monitor downtime shall be any operating hour in which the water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit

25. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The cogeneration system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

30. The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The owner or operator shall maintain a record of the cumulative rolling 12 month fuel usage for each turbine. The record shall be updated at the end of each calendar month. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

35. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (a)(2), 60.333 (b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(b), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 1081(as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, 7.3 and Rule 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-93-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-101, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-201, WITH A 36.4 MMBTU/HR COEN DUCT BURNER

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption by the cogeneration system (turbine and duct burner) shall not exceed 1,812,000 scf/day. Natural gas consumption by the cogeneration system shall not exceed 654 million scf/year. [District Rule 2201]
4. Emissions from the cogeneration system shall not exceed any of the following limits: 233.7 lb-NOx/day, 3.6 lb-SOx/day, 47.1 lb-PM10/day, 257.3 lb-CO/day, or 47.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration exceeding 35 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 and 4703, 5.1.2.1] Federally Enforceable Through Title V Permit
6. CO emissions from the cogeneration system with the duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb-CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. CO emissions from the cogeneration system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
8. Emissions from the cogeneration system (with or without duct burner firing) shall not exceed any of the following limits: 0.002 lb-SOx/MMBtu, 0.026 lb-PM10/MMBtu, or 0.026 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Reduced Load Period shall be defined as the time during which the gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate, not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit
10. Thermal Stabilization Period shall be defined as the startup or shutdown, as defined in 40 CFR 60.2, time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per startup or shutdown event. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) and the natural gas shall have a total sulfur content less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b) and District Rules 2201 and 4201] Federally Enforceable Through Title V Permit

12. The sulfur fuel content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377, or double GC for H2S and mercaptans. If the sulfur fuel content is less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every 6 months. If any six-month monitoring tests result in a sulfur fuel content exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

13. Performance testing shall be conducted annually to measure NOx and CO emissions concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The test will be comprised of three test runs performed at the highest physically achievable load of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, and 6.4] Federally Enforceable Through Title V Permit

14. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. Source testing shall not be required with the duct burner on if it has not been in operation during the previous 12 months, i.e. the duct burner need not be started to solely perform source testing. Source testing shall not be required with the duct burner off if it has been in continuous operation during the previous 12 months, i.e. the duct burner need not be shut-down solely to perform source testing. Source testing shall be performed within 60 days of startup or shutdown of the duct burner unless source testing of the duct burner has been performed in the previous 12 months. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

15. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

16. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in Rule 1081 (as amended 12/16/93), Sections 3.0 and 6.1. [District Rule1081] Federally Enforceable Through Title V Permit

17. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for approval 15 days prior to such testing. [District Rule 1081] Federally Enforceable Through Title V Permit

18. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall develop and keep on-site a parameter monitoring plan which includes the procedures used to document the proper operation of the NOx emissions controls (water injection). This plan shall include the parameter(s) monitored, such as the water-to-fuel ratio, and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturers recommendations and other relevant information shall be included in the monitoring plan. [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

21. The water to fuel ratio shall not be less than 0.45 on a weight basis. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

22. The owner or operator shall submit a semi-annual excess NOx emissions and monitor downtime report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by the 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water-to-fuel ratio, turbine load, nature and cause of excess emissions (if known), and corrective actions taken and preventative measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Excess emissions shall be defined as any operating hour for which the steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into the turbine shall also be considered as excess emissions. [40 CR 60.334(j)(1)(i)(A)] Federally Enforceable Through Title V Permit

24. Monitor downtime shall be any operating hour in which the water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit

25. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The cogeneration system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

30. The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The owner or operator shall maintain a record of the cumulative rolling 12 month fuel usage for each turbine. The record shall be updated at the end of each calendar month. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

35. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (a)(2), 60.333 (b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(b), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 1081(as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, 7.3 and Rule 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-95-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14

EQUIPMENT DESCRIPTION:
86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-102, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-202, WITH A 36.4 MMBTU/HR COEN DUCT BURNER

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption by the cogeneration system (turbine and duct burner) shall not exceed 1,812,000 scf/day. Natural gas consumption by the cogeneration system shall not exceed 654 million scf/year. [District Rule 2201]
4. Emissions from the cogeneration system shall not exceed any of the following limits: 233.7 lb-NOx/day, 3.6 lb-SOx/day, 47.1 lb-PM10/day, 257.3 lb-CO/day, or 47.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration exceeding 35 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 and 4703, 5.1.2.1] Federally Enforceable Through Title V Permit
6. CO emissions from the cogeneration system with the duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb-CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. CO emissions from the cogeneration system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
8. Emissions from the cogeneration system (with or without duct burner firing) shall not exceed any of the following limits: 0.002 lb-SOx/MMBtu, 0.026 lb-PM10/MMBtu, or 0.026 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Reduced Load Period shall be defined as the time during which the gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate, not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit
10. Thermal Stabilization Period shall be defined as the startup or shutdown, as defined in 40 CFR 60.2, time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per startup or shutdown event. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) and the natural gas shall have a total sulfur content less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b) and District Rules 2201 and 4201] Federally Enforceable Through Title V Permit

12. The sulfur fuel content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377, or double GC for H2S and mercaptans. If the sulfur fuel content is less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every 6 months. If any six-month monitoring tests result in a sulfur fuel content exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

13. Performance testing shall be conducted annually to measure NOx and CO emissions concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The test will be comprised of three test runs performed at the highest physically achievable load of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, and 6.4] Federally Enforceable Through Title V Permit

14. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. Source testing shall not be required with the duct burner on if it has not been in operation during the previous 12 months, i.e. the duct burner need not be started to solely perform source testing. Source testing shall not be required with the duct burner off if it has been in continuous operation during the previous 12 months, i.e. the duct burner need not be shut-down solely to perform source testing. Source testing shall be performed within 60 days of startup or shutdown of the duct burner unless source testing of the duct burner has been performed in the previous 12 months. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

15. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

16. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in Rule 1081 (as amended 12/16/93), Sections 3.0 and 6.1. [District Rule1081] Federally Enforceable Through Title V Permit

17. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for approval 15 days prior to such testing. [District Rule 1081] Federally Enforceable Through Title V Permit

18. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall develop and keep on-site a parameter monitoring plan which includes the procedures used to document the proper operation of the NOx emissions controls (water injection). This plan shall include the parameter(s) monitored, such as the water-to-fuel ratio, and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturers recommendations and other relevant information shall be included in the monitoring plan. [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

21. The water to fuel ratio shall not be less than 0.45 on a weight basis. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

22. The owner or operator shall submit a semi-annual excess NOx emissions and monitor downtime report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by the 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water-to-fuel ratio, turbine load, nature and cause of excess emissions (if known), and corrective actions taken and preventative measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Excess emissions shall be defined as any operating hour for which the steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into the turbine shall also be considered as excess emissions. [40 CR 60.334(j)(1)(i)(A)] Federally Enforceable Through Title V Permit

24. Monitor downtime shall be any operating hour in which the water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit

25. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The cogeneration system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

30. The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The owner or operator shall maintain a record of the cumulative rolling 12 month fuel usage for each turbine. The record shall be updated at the end of each calendar month. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

35. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (a)(2), 60.333 (b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(b), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 1081(as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, 7.3 and Rule 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-97-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-103, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-203, WITH A 36.4 MMBTU/HR COEN DUCT BURNER

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. The Owner/Operator shall maintain a separate fuel meter to the turbine and a fuel meter to the duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption by the cogeneration system (turbine and duct burner) shall not exceed 1,812,000 scf/day. Natural gas consumption by the cogeneration system shall not exceed 654 million scf/year. [District Rule 2201]
4. Emissions from the cogeneration system shall not exceed any of the following limits: 233.7 lb-NOx/day, 3.6 lb-SOx/day, 47.1 lb-PM10/day, 257.3 lb-CO/day, or 47.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration exceeding 35 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 and 4703, 5.1.2.1] Federally Enforceable Through Title V Permit
6. CO emissions from the cogeneration system with the duct burner firing shall not exceed 53 ppmv CO @ 15% O2 or 0.119 lb-CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. CO emissions from the cogeneration system without duct burner firing shall not exceed 63 ppmv CO @ 15% O2 or 0.142 lb CO/MMBtu, excluding thermal stabilization periods or reduced load periods. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
8. Emissions from the cogeneration system (with or without duct burner firing) shall not exceed any of the following limits: 0.002 lb-SOx/MMBtu, 0.026 lb-PM10/MMBtu, or 0.026 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Reduced Load Period shall be defined as the time during which the gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate, not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit
10. Thermal Stabilization Period shall be defined as the startup or shutdown, as defined in 40 CFR 60.2, time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per startup or shutdown event. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) and the natural gas shall have a total sulfur content less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b) and District Rules 2201 and 4201] Federally Enforceable Through Title V Permit

12. The sulfur fuel content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377, or double GC for H2S and mercaptans. If the sulfur fuel content is less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every 6 months. If any six-month monitoring tests result in a sulfur fuel content exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

13. Performance testing shall be conducted annually to measure NOx and CO emissions concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The test will be comprised of three test runs performed at the highest physically achievable load of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, and 6.4] Federally Enforceable Through Title V Permit

14. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. Source testing shall not be required with the duct burner on if it has not been in operation during the previous 12 months, i.e. the duct burner need not be started to solely perform source testing. Source testing shall not be required with the duct burner off if it has been in continuous operation during the previous 12 months, i.e. the duct burner need not be shut-down solely to perform source testing. Source testing shall be performed within 60 days of startup or shutdown of the duct burner unless source testing of the duct burner has been performed in the previous 12 months. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

15. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

16. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in Rule 1081 (as amended 12/16/93), Sections 3.0 and 6.1. [District Rule1081] Federally Enforceable Through Title V Permit

17. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for approval 15 days prior to such testing. [District Rule 1081] Federally Enforceable Through Title V Permit

18. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall develop and keep on-site a parameter monitoring plan which includes the procedures used to document the proper operation of the NOx emissions controls (water injection). This plan shall include the parameter(s) monitored, such as the water-to-fuel ratio, and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturers recommendations and other relevant information shall be included in the monitoring plan. [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

21. The water to fuel ratio shall not be less than 0.45 on a weight basis. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

22. The owner or operator shall submit a semi-annual excess NOx emissions and monitor downtime report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by the 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water-to-fuel ratio, turbine load, nature and cause of excess emissions (if known), and corrective actions taken and preventative measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Excess emissions shall be defined as any operating hour for which the steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into the turbine shall also be considered as excess emissions. [40 CR 60.334(j)(1)(i)(A)] Federally Enforceable Through Title V Permit

24. Monitor downtime shall be any operating hour in which the water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit

25. Fuel consumption and the water-to-fuel ratio shall be monitored continuously with a system that is accurate to within 5 percent. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The cogeneration system shall be equipped with a meter recording the total elapsed operating time. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee 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] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. If the water injection system is inoperative when the turbine is running, the operator shall follow procedures pursuant to District Rule 1100 (Equipment Breakdown). [District Rule 1100] Federally Enforceable Through Title V Permit

30. The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and quantity used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments and emissions measurements. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The owner or operator shall maintain a record of the cumulative rolling 12 month fuel usage for each turbine. The record shall be updated at the end of each calendar month. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

35. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (a)(2), 60.333 (b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(b), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 1081(as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, 7.3 and Rule 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-105-2 **EXPIRATION DATE:** 12/31/2005

EQUIPMENT DESCRIPTION:
118 CLOSED-VENT CYCLIC WELLS.

PERMIT UNIT REQUIREMENTS

1. Sulfur compound emissions shall not exceed 2000 ppmv as SO2. [District Rule 4801, 3.0] Federally Enforceable Through Title V Permit
2. Well casing vents shall remain closed at all times except during periods of actual service or repair while wells are not producing. [District Rule 4401, 5.0, 4.1] Federally Enforceable Through Title V Permit
3. The operator shall maintain monitoring records of the date and well identification where steam injection or thermally enhanced well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
4. A leak is defined as a reading in excess of 10,000 ppm when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit
5. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
6. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
7. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-106-1 **EXPIRATION DATE:** 12/31/2005

EQUIPMENT DESCRIPTION:
20 CLOSED VENT STEAM DRIVE WELLS.

PERMIT UNIT REQUIREMENTS

1. Sulfur compound emissions shall not exceed 2000 ppmv as SO2. [District Rule 4801, 3.0] Federally Enforceable Through Title V Permit
2. Well casing vents shall remain closed at all times except during periods of actual service or repair while wells are not producing. [District Rule 4401, 5.0, 4.1] Federally Enforceable Through Title V Permit
3. The operator shall maintain monitoring records of the date and well identification where steam injection or thermally enhanced well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
4. A leak is defined as a reading in excess of 10,000 ppm when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit
5. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
6. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
7. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-111-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 70 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-1-13D WITH SEPARATOR, LOW PRESSURE AIR COOLER AND CONDENSATE COLLECTOR (SOUTHEAST)

PERMIT UNIT REQUIREMENTS

1. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended January 15, 1998). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
2. The operator shall maintain monitoring records of the date and well identification where steam injection or well steam stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
4. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit
5. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed 8 at any time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
6. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
7. Operator shall repair each leak within 15 calendar days of detection. The APCO may grant a 10 calendar day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
8. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit
9. VOC content shall be determined using the latest revision of ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
10. The source shall perform leak inspections at least 20% of the wells connected to the system annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
12. Compliance with permit conditions in the Title V permit shall be deemed in compliance with SJVUAPCD Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
13. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
14. Operation of the low pressure air cooler is optional. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Collected vapors shall be incinerated in steam generators approved by the District for TEOR gas incineration. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
16. The VOC portion of the Total Organic Compounds (TOC) present in the well vent vapors shall not exceed 13.4% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit
17. Total VOC emissions shall not exceed 20.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Permittee shall maintain a current roster of all wells connected to this system. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-112-11 **EXPIRATION DATE:** 12/31/2005

SECTION: 6C **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TEOR OPERATION #6C-CC-1 SERVING 20 AUTOMATIC WELL TESTERS AND 326 STEAM DRIVE WELLS WITH INLET SEPARATOR VESSEL, TWO FIN FAN EXCHANGERS, OUTLET SEPARATOR VESSEL, TWO CENTRIFUGAL TRANSFER PUMPS, MIST ELIMINATOR AND PIPING TO TEOR OPERATION #CC-1-25 (C-311-79)

PERMIT UNIT REQUIREMENTS

1. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
2. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401 3.20] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. 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] Federally Enforceable Through Title V Permit
5. 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] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

7. 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] Federally Enforceable Through Title V Permit

8. 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] Federally Enforceable Through Title V Permit

9. In addition to the inspections required by Section 5.8.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of Rule 4401. [District Rule 4401 5.8.3] Federally Enforceable Through Title V Permit

10. In addition to the inspections required by Sections 5.8.1, 5.8.2 and 5.8.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.8.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401 5.8.4] Federally Enforceable Through Title V Permit

11. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401 5.8.5] Federally Enforceable Through Title V Permit

12. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401 5.8.6] Federally Enforceable Through Title V Permit

13. 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] Federally Enforceable Through Title V Permit

14. 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] Federally Enforceable Through Title V Permit

15. 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] Federally Enforceable Through Title V Permit

16. 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] Federally Enforceable Through Title V Permit

17. 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

18. 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] Federally Enforceable Through Title V Permit

19. 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] Federally Enforceable Through Title V Permit

20. 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] Federally Enforceable Through Title V Permit

21. 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] Federally Enforceable Through Title V Permit

22. 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 of Rule 4401. [District Rule 4401 6.1.3] Federally Enforceable Through Title V Permit

23. The results of source tests conducted pursuant to Section 4.6.2 of Rule 4401 shall be submitted to the APCO within 60 days after the completion of the source test. [District Rule 4401 6.1.4] Federally Enforceable Through Title V Permit

24. 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] Federally Enforceable Through Title V Permit

25. 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] Federally Enforceable Through Title V Permit

26. 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] Federally Enforceable Through Title V Permit

27. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401 6.1.8] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

29. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

30. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401 6.2.2] Federally Enforceable Through Title V Permit

31. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 for a vapor control system which does not have a VOC destruction device. [District Rule 4401 6.2.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. An operator seeking approval pursuant to Section 6.2.2 or Section 6.2.3 shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401 6.2.4] Federally Enforceable Through Title V Permit

33. 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 not later than June 14, 2007. 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] Federally Enforceable Through Title V Permit

34. 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] Federally Enforceable Through Title V Permit

35. 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] Federally Enforceable Through Title V Permit

36. 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] Federally Enforceable Through Title V Permit

37. 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] Federally Enforceable Through Title V Permit

38. 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, the 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. The source shall perform leak inspections at least 20% of the wells connected to the system annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. [District Rules 2520, 9.3.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

41. Compliance with permit conditions in the Title V permit shall be deemed in compliance with SJVUAPCD Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. Volatile Organic Compound (VOC) emissions shall not exceed 2.237 lb/day per well. [District NSR Rule] Federally Enforceable Through Title V Permit

44. Operation of the fin fan exchanger is optional. [District NSR Rule] Federally Enforceable Through Title V Permit

45. The 6C-CC-1 system may be operated as a vapor balance system and/or an active well vent vapor recovery system. When operated as a vapor balance system valves associated with the 6C-CC-1 system may be closed to allow condensate and noncondensable gas to be displaced to the reservoir through wells served by the system. [District NSR Rule] Federally Enforceable Through Title V Permit

46. Collected VOC vapors shall be incinerated in steam generators C-311-36, '-37, '-38, '-39, '-40, '-41, '-52, '-53, '-55, '-56, '-76, -'84, or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit

47. Permittee shall provide District with a copy of D.O.G.G.R. approval for each vapor disposal well prior to use for vapor injection. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

48. Gases from the separator vessels shall be vented to the casing collection system. [District NSR Rule] Federally Enforceable Through Title V Permit

49. Oil/water production piping for all wells associated with this casing collection system shall be connected one or more Chevron tanks under District approved tank vapor recovery systems. [District NSR Rule] Federally Enforceable Through Title V Permit

50. Operation of the casing collection system as a casing balance system shall not cause gas flow rates at the 6C and or 13D Oil Cleaning Plant in excess of the design capacity of the tank vapor recovery compressor. [District NSR Rule] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-114-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 18 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
23 MMBTU/HR HOPPER STEAM GENERATOR, HSG-36, NATURAL GAS FIRED WITH ONE NORTH AMERICAN BURNER, DIS #21013-66.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. 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]
8. Natural gas consumption shall not exceed 526,000 cubic feet per day nor 192 million cubic feet per year. [District Rule 2201]
9. Fuel consumption shall be recorded on a daily basis. Records shall be retained for at least two years and made available to the District upon request. [District Rule 1070]
10. This unit shall be fired exclusively with natural gas. [District Rule 2201]
11. Daily emission limit shall not exceed: PM10 - 2.63 lb/day, SOx - 0.32 lb/day, NOx - 18.9 lb/day, CO - 18.4 lb/day, or VOC(NMHC) - 1.47 lb/day. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-117-2 **EXPIRATION DATE:** 12/31/2005

SECTION: 18 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
23 MMBTU/HR HOPPER STEAM GENERATOR, HSG-1, NATURAL GAS FIRED, WITH ONE NORTH AMERICAN BURNER, DIS #5702-66.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. The emissions shall not exceed 30 ppm NOx (0.036 lb-NOx/MMBtu) @ 3% O2. [District Rule 4305]
4. No modification to this unit shall be performed without an Authority to Construct for that modification(s), except for changes specified in condition 5. [District Rule 2201]
5. The fuel supply line, water line and the electrical power output connection shall be physically disconnected from the unit. [District Rule 4305]
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1081]
7. 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]
8. Natural gas consumption shall not exceed 526,000 cubic feet per day nor 192 million cubic feet per year. [District Rule 2201]
9. Fuel consumption shall be recorded on a daily basis. Records shall be retained for at least two years and made available to the District upon request. [District Rule 1070]
10. This unit shall be fired exclusively with natural gas. [District Rule 2201]
11. Daily emission limit shall not exceed: PM10 - 2.63 lb/day, SOx - 0.32 lb/day, NOx - 18.9 lb/day, CO - 18.4 lb/day, or VOC(NMHC) - 1.47 lb/day. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-122-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-101: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. When storing organic liquids of TVP less than 0.5 psia, permittee may conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

40. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-123-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-102: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

40. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-124-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-103: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

40. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-125-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-400: 84,546 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H, CAPACITY: 2,013 BBLS: SERVED BY SHARED VAPOR RECOVERY SYSTEM ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

40. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-126-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-300: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

40. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-127-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-200: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39.0'D X 24.0'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

40. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-128-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-201: 126,840 GALLON (3,020 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

40. Records of annual throughput of crude oil shall be maintained, retained for a period of at least 5 years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-129-8 **EXPIRATION DATE:** 12/31/2005

SECTION: 6 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #T-500: 216,468 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 48'D X 16'H, SERVED BY A VAPOR RECOVERY SYSTEM INCLUDING CONDENSER, COMPRESSOR, CONDENSATE COLLECTION VESSEL, TRANSFER PUMP AND BACK-UP/STANDBY ELECTRIC COMPRESSOR SERVED BY SHARED CASING COLLECTION SYSTEM FOR SECTION 6C - PERMIT UNIT C-311-112 AND TANK PERMIT UNITS C-311-122, -123, -124, -125, -126, -127, -128 AND -129

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Throughput of liquid to the storage tank shall not exceed 5.88 million gallons per year. [District NSR Rule] Federally Enforceable Through Title V Permit

29. VOC emissions from this tanks shall not exceed 2.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

30. Vapor pressure of liquids stored shall not exceed 5 psia reid vapor pressure nor 3.6 psia true vapor pressure. [District NSR Rule] Federally Enforceable Through Title V Permit

31. Collected condensed vapors shall be returned to one of the storage tanks served by the vapor recovery system. [District NSR Rule] Federally Enforceable Through Title V Permit

32. Permittee shall record annual liquid throughput and true vapor pressure of the liquids stored. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit

33. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and section 6.3.6 of District Rule 4623 (amended 12/20/01). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District NSR Rule, District Rules 2520, 9.3.2 and 4623, 6.3.1] Federally Enforceable Through Title V Permit

34. The vapor recovery system shall control the tanks identified in permit units C-311-122, -123, -124, -125, -126, -127, -128 and -129. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

43. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

44. The vapor recovery system may control the recovered well casing vapors from permit unit C-311-112 during operation of the casing collection system as a casing balance system. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit

45. The 6C-CC-1 system (C-311-112) may be operated as a vapor balance system and/or an active well vent vapor recovery system. When operated as a vapor balance system valves associated with the 6C-CC-1 system (C-311-112) may be closed to allow condensate and noncondensable gas to be displaced to the reservoir through wells served by the system. [District NSR Rule] Federally Enforceable Through Title V Permit

46. Collected VOC vapors shall be incinerated in steam generators C-311-36, '-37, '-38, '-39, '-40, '-41, '-52, '-53, '-55, '-56, '-76 and -'84, or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit

47. Operation of the casing collection system as a casing balance system shall not cause gas flow rates at the 6C, 13D and/or 25D Oil Cleaning Plant in excess of the design capacity of the tank vapor recovery compressor. [District NSR Rule] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-142-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 11 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #3369: 24,554 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 16'H, CAPACITY: 537 BBLS.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
2. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in 40 CFR 60.113 and section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. Monthly records of average daily throughput shall be maintained, retained for at least five years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.4.2, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-143-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 11 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK #3581: 225,546 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 24'H, CAPACITY: 5,368 BBLS.

PERMIT UNIT REQUIREMENTS

1. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.4.2, 9.5.2] Federally Enforceable Through Title V Permit
2. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
3. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-146-8 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #13-23: 84,546 GALLON (2,013 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING (2) 50 HP COMPRESSOR, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM FOR PERMIT UNITS C-311-112, -146, -147, -150, -196, -197 AND -198

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

27. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

28. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended May 16, 2002) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

31. The tank vapor recovery system shall also be connected to tanks permitted as PTO #C-311-146, -147, -149, -150, -196, -197 and -198. [District Rule 4623] Federally Enforceable Through Title V Permit

32. This tank shall only store crude oil with a true vapor pressure (TVP) of less than 11.0 psia. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Collected vapors are to be incinerated in gas fired steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

34. Collected vapors shall be incinerated in steam generators approved by the District for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

35. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and section 6.3.6 of District Rule 4623 (amended 12/20/01). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 6.3.1] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

40. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

41. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

43. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

44. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

45. The vapor recovery system may control the recovered well casing vapors from permit units C-311-77, '-78, '-83 and '-111 during operation of the casing collection system as a casing balance system. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit

46. The 13D system (C-311-77, '-78, '-83 and '-111) may be operated as a vapor balance system and/or an active well vent vapor recovery system. When operated as a vapor balance system valves associated with the 13D system (C-311-77, '-78, '-83 and '-111) may be closed to allow condensate and noncondensable gas to be displaced to the reservoir through wells served by the system. [District NSR Rule] Federally Enforceable Through Title V Permit

47. Collected VOC vapors shall be incinerated in steam generators C-311-19, '-20, '-27, '-28, -'30, -36, '-37, '-38, '-39, '-40 and '-41, or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit

48. Operation of the casing collection system as a casing balance system shall not cause gas flow rates at the 6C, 13D and/or 25D Oil Cleaning Plant in excess of the design capacity of the tank vapor recovery compressor. [District NSR Rule] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-147-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #13-22: 84,546 GALLON (2,013 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

32. This tank shall only store crude oil with a true vapor pressure (TVP) of less than 11.0 psia. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Collected vapors are to be incinerated in gas fired steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

34. Permittee shall record annual throughput of crude oil. Records shall be retained for five years and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

35. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and section 6.3.6 of District Rule 4623 (amended 12/20/01). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 6.3.1] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

40. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

41. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

43. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

44. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-150-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 13 **TOWNSHIP:** 20S **RANGE:** 14

EQUIPMENT DESCRIPTION:
TANK #13-18: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning, maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

32. Collected vapors are to be incinerated in gas fired steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

42. Permittee shall record annual throughput of crude oil. Records shall be retained for five years and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-151-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 36 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
TANK I.D. NO. T-200, 544 BBL FIXED ROOF WEMCO SKIM STORAGE TANK (22' DIAMETER X 8' HEIGHT). CAPACITY: 22,800 GALLONS.

PERMIT UNIT REQUIREMENTS

1. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, 2520, 9.4.2, and 9.5.2] Federally Enforceable Through Title V Permit
2. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
3. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-163-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-31: 197,274 GALLON (4,697 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 21'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

32. 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 4623] Federally Enforceable Through Title V Permit

33. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

43. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-164-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-32: 197,274 GALLON (4,697 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 21'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

32. 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 4623] Federally Enforceable Through Title V Permit

33. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

43. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-165-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-29: 234,864 GALLON (5,592 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 50'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

32. 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 4623] Federally Enforceable Through Title V Permit

33. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

43. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-166-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-30: 234,864 GALLON (5,592 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 50'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

32. 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 4623] Federally Enforceable Through Title V Permit

33. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

43. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-167-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-33: 150,318 GALLON (3,579 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-168-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-34: 150,318 GALLON (3,579 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-169-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-60: 59,808 GALLON (1,424 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 26.5'D X 14.5'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

32. 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 4623] Federally Enforceable Through Title V Permit

33. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

43. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-170-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-37: 79,842 GALLON (1,901 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 8.5'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

32. 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 4623] Federally Enforceable Through Title V Permit

33. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

43. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-177-9 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #25-42: 210,000 GALLON (5,047 BBL) FIXED ROOF FREE WATER KNOCK OUT TANK, 47.5'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING 50 HP COMPRESSOR AND 50 HP BACKUP COMPRESSOR, TWO VERTICAL SCRUBBERS, FIN FAN COOLER, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM WITH PERMIT UNITS C-311-163, -164, -165, -166, -167, -168, -169, -170 AND -177

PERMIT UNIT REQUIREMENTS

1. 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, or an approved VOC destruction device the reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3). However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), then any deviations that are addressed under the provisions of Table 3 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3), prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. 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

23. 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, 6.4.4] Federally Enforceable Through Title V Permit

24. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. Collected vapor shall be incinerated in steam generators approved by the District for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

26. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

27. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

28. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

31. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

32. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

39. VOC fugitive emissions from the components on tank an vapor control system shall not exceed 24.9 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

41. The vapor recovery system shall control the tanks identified in permit units C-311-163, -164, -165, -166, -167, -168, -169, -170 and -177. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit

42. The vapor recovery system may control the recovered well casing vapors from permit unit C-311-79 during operation of the casing collection system as a casing balance system. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit

43. The 25D system (C-311-79) may be operated as a vapor balance system and/or an active well vent vapor recovery system. When operated as a vapor balance system valves associated with the 25D system (C-311-79) may be closed to allow condensate and noncondensable gas to be displaced to the reservoir through wells served by the system. [District NSR Rule] Federally Enforceable Through Title V Permit

44. Collected VOC vapors shall be incinerated in steam generators C-311-36, '-37, '-38, '-39, '-40 and '-41 or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit

45. Operation of the casing collection system as a casing balance system shall not cause gas flow rates at the 6C, 13D and/or 25D Oil Cleaning Plant in excess of the design capacity of the tank vapor recovery compressor. [District NSR Rule] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-180-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #T-3: 19,740 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 15.5'H, CAPACITY: 523 BBLS.

PERMIT UNIT REQUIREMENTS

1. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, 2520, 9.4.2, and 9.5.2] Federally Enforceable Through Title V Permit
2. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
3. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-181-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #T-4: 19,740 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 15.5'H, CAPACITY: 523 BBLS.

PERMIT UNIT REQUIREMENTS

1. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, 2520, 9.4.2, and 9.5.2] Federally Enforceable Through Title V Permit
2. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
3. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-182-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 25 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #T-5: 11,298 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 8'H, CAPACITY: 269 BBLS.

PERMIT UNIT REQUIREMENTS

1. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, 2520, 9.4.2, and 9.5.2] Federally Enforceable Through Title V Permit
2. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
3. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-193-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 36 **TOWNSHIP:** 19S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #CO-T-57: 10,584 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15'D X 8'H, CAPACITY: 252 BBLS.

PERMIT UNIT REQUIREMENTS

1. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, 2520, 9.4.2, and 9.5.2] Federally Enforceable Through Title V Permit
2. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
3. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-194-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 36 **TOWNSHIP:** 19S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #CO-T-58: 10,584 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15'D X 8'H, CAPACITY: 252 BBLS.

PERMIT UNIT REQUIREMENTS

1. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, 2520, 9.4.2, and 9.5.2] Federally Enforceable Through Title V Permit
2. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
3. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-196-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 13D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #13-29: 210,000 GALLON (5,000 BBL) FIXED ROOF WASH TANK, 38.37' D X 24' H, SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

23. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

24. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

25. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. 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 NSR Rule] Federally Enforceable Through Title V Permit

31. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

32. Collected vapors are to be incinerated in gas fired steam generators. [District Rule 4623] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

39. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

43. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-197-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 13D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #13-30: 5,000 BBL FIXED ROOF WASH TANK, 38.75' D X 24'H, SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. 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 NSR Rule] Federally Enforceable Through Title V Permit

32. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Collected vapors are to be incinerated in gas fired steam generators. [District Rule 4623] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

38. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

42. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

43. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-198-6 **EXPIRATION DATE:** 12/31/2005

SECTION: 13D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
TANK #13-13: 11,300 GALLON FIXED ROOF SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

PERMIT UNIT REQUIREMENTS

1. 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 gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Except during tank cleaning and maintenance, all piping valves and fittings shall be constructed and maintained in a gas tight condition. [District Rules 2520, 9.3.2 and 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A gas-tight 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, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. When storing organic liquids of TVP equal to or greater than 0.5 psia, all piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. When storing organic liquids of TVP equal to or greater than 0.5 psia, if any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, Section 5.7 (Table 3), amended 12/20/01, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired unit the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

17. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. When storing liquids of TVP equal to or greater than 0.5 psia, if the source can demonstrate compliance with the provisions of Rule 4623, Section 5.7 (Table 3), amended 12/20/01, then any deviations that are addressed under the provisions of Table 3 through 6 shall not be in violation of this permit. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

20. An operator whose tanks are subject to the requirements of District Rule 4623 (amended 12/20/01), shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

21. TVP determinations shall be made whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7 (Table 3) amended 12/20/01, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2; 4623, 5.7 and 6.2.1.1.3] Federally Enforceable Through Title V Permit

22. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

23. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

24. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 4623, 6.2.4] Federally Enforceable Through Title V Permit

25. The efficiency of any VOC destruction device shall be measured by EPA Method 18, 25, or 25a. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

26. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

28. 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 NSR Rule] Federally Enforceable Through Title V Permit

29. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit

30. Collected vapors are to be incinerated in gas fired steam generators. [District Rule 4623, 5.3.1] Federally Enforceable Through Title V Permit

31. Throughput of crude oil shall not exceed 200 bbl per day. [District NSR Rule] Federally Enforceable Through Title V Permit

32. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit

33. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

34. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

35. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

36. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

37. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = 2.3\ V / Q$, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

38. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

39. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

40. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

42. Permittee shall record average daily throughput of crude oil. Records shall be retained for five years and provided to the District upon request. [District NSR Rule and 2520, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-205-1 **EXPIRATION DATE:** 12/31/2005

EQUIPMENT DESCRIPTION:
20 OPEN-VENT CYCLIC WELLS.

PERMIT UNIT REQUIREMENTS

1. There may be no more than 20 open-vent cyclic-driven petroleum production wells at this stationary source. [District Rule 4401] Federally Enforceable Through Title V Permit
2. The well is located more than 1000 feet from an existing well vent vapor control system operated by the company. [District Rule 4401, 4.5.1] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-215-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-1, 21'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
2. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. The permittee shall keep accurate records of Reid vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 4623, 6.1.1, and 2520, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-216-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK 24-2, 21'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
2. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. The permittee shall keep accurate records of Reid vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 4623, 6.1.1, and 2520, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-217-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
84,000 GALLONS (2,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-3, 30'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
2. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. The permittee shall keep accurate records of Reid vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 4623, 6.1.1, and 2520, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-219-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK 24-5, 21'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
2. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. The permittee shall keep accurate records of Reid vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 4623, 6.1.1, and 2520, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-220-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-6, 21'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
2. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in and section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. The permittee shall keep accurate records of Reid vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 4623, 6.1.1, and 2520, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-221-1 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
84,000 GALLON (2,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-7, 30'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
2. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in and section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. The permittee shall keep accurate records of Reid vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 4623, 6.1.1, and 2520, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-222-4 **EXPIRATION DATE:** 12/31/2005

EQUIPMENT DESCRIPTION:
126,000 GALLON (3000 BBLS) CONE BOTTOM WASH TANK #24-9, 24' HEIGHT X 30' DIAMETER

PERMIT UNIT REQUIREMENTS

1. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
2. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. The permittee shall keep accurate records of Reid vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 4623, 6.1.1, and 2520, 9.5.2] Federally Enforceable Through Title V Permit
5. Tank shall only operated as a constant liquid level tank. [District NSR Rule] Federally Enforceable Through Title V Permit
6. True vapor pressure shall not exceed 0.5 psia at liquid storage temperatures. [District NSR Rule] Federally Enforceable Through Title V Permit
7. 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, shall be used to determine the TVP of crude oil with an API gravity of 20 degrees or less, or for any API gravity that is specified in this test method. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
8. VOC emissions shall not exceed 1.5 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-223-1 **EXPIRATION DATE:** 12/31/2005

EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-10, 21'D X 16'H.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
2. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. The permittee shall keep accurate records of Reid vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 4623, 6.1.1, and 2520, 9.5.2] Federally Enforceable Through Title V Permit
6. The tank shall be operated at constant level. [District NSR Rule] Federally Enforceable Through Title V Permit
7. VOC emissions shall not exceed 1.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Permittee shall record TVP and daily throughput of crude oil. Records shall be retained for at least five years and provided to the District upon request. [District Rule 1070, and 2520, 9.4.2, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-226-1 **EXPIRATION DATE:** 12/31/2005

EQUIPMENT DESCRIPTION:
126,000-GALLON (3000 BBLS) FIXED ROOF TANK (NEW TANK), 24' HEIGHT X 30' DIAMETER

PERMIT UNIT REQUIREMENTS

1. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, 2520, 9.4.2, and 9.5.2] Federally Enforceable Through Title V Permit
2. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
3. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in section 6.2 of District Rule 4623 (amended 12/17/92). Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. The operator shall keep accurate records of types, storage temperature, and TVP of liquids stored to verify continued exemption from District Rule 4623 (amended 12/17/92). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-227-0 **EXPIRATION DATE:** 12/31/2005

EQUIPMENT DESCRIPTION:
ONE 2,000 GALLON ABOVE GROUND STORAGE TANK SERVED BY TWO-POINT PHASE I VAPOR RECOVERY SYSTEM AND ONE FUELING POINT WITH ONE GASOLINE DISPENSING NOZZLE SERVED BY BALANCE PHASE II VAPOR RECOVERY SYSTEM (G-70-116-A).

PERMIT UNIT REQUIREMENTS

1. The permittee shall perform and pass a Static Pressure Decay Test using BAAQMD Method ST-38 at least once every 12 months. [District Rule 4622]
2. Aboveground storage tank(s) shall be equipped with pressure/vacuum valves set to within 10 percent of the maximum working pressure of the tank. [District Rule 4621]
3. The District shall be notified by the permittee 15 days prior to each test. The test results shall be submitted to the District no later than 30 days after each test. [District Rule 1081]
4. The vapor recovery systems and their components shall be operated and maintained in accordance with the State certification requirements. [District Rules 4621 and 4622]
5. Formerly permit #C-1939-1-2.

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-228-0 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
MS-716, VAPOR RECOVERY PLANT, FOR WELL CASING HEAD HYDROCARBON VAPOR RECOVERY, UTILIZING THE FOLLOWING EQUIPMENT: 11V1 LIQUID SCRUBBER; 10E1 GAS WATER COOLER; 10V2 CONDENSATE KO DRUM; 10P1 CONDENSATE PUMP SERVING 46 WELLS.

PERMIT UNIT REQUIREMENTS

1. Vapor recovery system shall operate at a collection efficiency of 99 percent. [District Rule 2520, 9.1] Federally Enforceable Through Title V Permit
2. A record of all wells serviced by this vapor recovery system and which well casing vents are shut-in shall be maintained, retained on the premises. [District Rule 1070 and Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
3. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
4. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by source testers certified by the California Air Resources Board (CARB) during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the annual testing requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless open flare, and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components and number of components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. VOC content shall be determined using ASTM Method E168-67, E169-63, or E260-73 as applicable. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Annual performance tests for hydrocarbon must be conducted and reported in accordance with the test methods set for the in 40 CFR 60, Part 60.8 and Appendix A. Performance tests for hydrocarbon shall be conducted using procedures approved in advance by the EPA in writing. The EPA and APCO must be notified in writing at least 30 day prior to conduction such tests. [PSD 4-4-8, SJ77-45 condition IX.H.1 and IXH.2] Federally Enforceable Through Title V Permit

14. Formerly C-1121-115-1

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-229-0 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1,000 BBL) FIXED ROOF CRUDE OIL TANK (#T-1432) WITH DIAMETER 21', HEIGHT 16'

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
3. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
5. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. The operator shall keep an accurate daily record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. [District Rules 2520, 9.3.2 & 4623, 6.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Formerly C-1121-140-2

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-230-0 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK (#T-9729) WITH DIAMETER 21', HEIGHT 16'

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
3. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
5. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. The operator shall keep an accurate daily record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. [District Rules 2520, 9.3.2 & 4623, 6.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Formerly C-1121-142-2

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-231-0 **EXPIRATION DATE:** 12/31/2005

SECTION: 24 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK (#T-9731) WITH DIAMETER 21', HEIGHT 16'

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
3. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
5. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
8. As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. The operator shall keep an accurate daily record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. [District Rules 2520, 9.3.2 & 4623, 6.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Formerly C-1121-143-2

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-232-0 **EXPIRATION DATE:** 12/31/2005

SECTION: 31 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK WITH DIAMETER 21', HEIGHT 16'

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] 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, 4.4] Federally Enforceable Through Title V Permit
3. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] 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, 6.3.6] Federally Enforceable Through Title V Permit
9. As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The operator shall keep an accurate daily record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. [District Rules 2520, 9.3.2 & 4623, 6.3.1] Federally Enforceable Through Title V Permit

11. This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Formerly C-1121-162-2

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-233-0 **EXPIRATION DATE:** 12/31/2005

SECTION: 31 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK WITH DIAMETER 21', HEIGHT 16'

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] 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, 4.4] Federally Enforceable Through Title V Permit
3. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] 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, 6.3.6] Federally Enforceable Through Title V Permit
9. As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The operator shall keep an accurate daily record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. [District Rules 2520, 9.3.2 & 4623, 6.3.1] Federally Enforceable Through Title V Permit

11. This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Formerly C-1121-163-2

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-234-0 **EXPIRATION DATE:** 12/31/2005

SECTION: 31 **TOWNSHIP:** 20S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK WITH DIAMETER 21', HEIGHT 16'

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] 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, 4.4] Federally Enforceable Through Title V Permit
3. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] 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, 6.3.6] Federally Enforceable Through Title V Permit
9. As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The operator shall keep an accurate daily record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. [District Rules 2520, 9.3.2 & 4623, 6.3.1] Federally Enforceable Through Title V Permit

11. This unit does not store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended December 17, 1992) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit commenced construction, modification, or reconstruction before May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. The requirements of 40 CFR 63 Subpart F are for HAPs located at a synthetic organic chemical manufacturing industrial facility and do not apply to this source. This tank is located at an oil production facility defined in the standard industrial classification code (SIC) as 2911 and is not subject to the requirements of 40 CFR 63 Subpart CC. HAPs leaks from oil production tanks process are not listed in 40 CFR 63.190 and therefore are not subject to 40 CFR 63 Subpart I . A permit shield is granted from the requirements of 40 CFR 63 Subpart CC, F and I. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Formerly C-1121-164-2

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-235-0 **EXPIRATION DATE:** 12/31/2005

SECTION: 25D **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:
600 BHP CUMMINGS MODEL #KTA19C52 (SERIAL #31134968) DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit
4. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit
5. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit
6. Emissions from this IC engine shall not exceed any of the following limits: 14.1 g-NOx/bhp-hr, 3.03 g-CO/bhp-hr, or 1.14 g-VOC/bhp-hr. [17 CCR 93115]
7. Emissions from this IC engine shall not exceed 1.0 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [17 CCR 93115]
8. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 20 hours per calendar year. [17 CCR 93115]
9. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702, 4.2.1] Federally Enforceable Through Title V Permit
10. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
12. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
13. 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 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
14. This permit unit was formerly number C-311-91.

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-237-1 **EXPIRATION DATE:** 12/31/2005

EQUIPMENT DESCRIPTION:
TANK #T-7: 126,000 GALLON (3,000 BBL) FIXED ROOF CRUDE OIL STORAGE/WASH TANK (30'D X 24'H) WITH PV VALVE

PERMIT UNIT REQUIREMENTS

1. VOC emission rate from the tank shall not exceed 310.9 lb/day, based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The total daily throughput of oil shall not exceed 938 barrels (for combined storage and wash tank operation), based on a monthly average. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
3. The total annual throughput of oil shall not exceed 180,000 barrels (for combined storage and wash tank operation). [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
4. The total daily throughput of oil and water combined shall not exceed 5,811 barrels (for combined storage and wash tank operation), based on a monthly average. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
5. The total annual throughput of oil and water combined shall not exceed 126,774 barrels (for storage operation only), based on a calendar year. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a fixed roof and maintained with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
8. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 2201] Federally Enforceable Through Title V Permit
9. 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
10. 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
11. 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

12. 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
13. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Permittee shall maintain monthly and annual records of average daily oil and water throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. 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
16. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-311-240-1 **EXPIRATION DATE:** 12/31/2005

EQUIPMENT DESCRIPTION:
600 BBL PRESSURE VESSEL VENTED TO TEOR OPERATION C-311-79

PERMIT UNIT REQUIREMENTS

1. Fugitive VOC emission components exclude piping and components handling produced fluids having less than 10% VOC by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly sampling of tank vapors to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
6. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
7. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit
10. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]

ATTACHMENT C

Detailed Facility List

Detailed Facility Report

For Facility=311 and excluding Deleted Permits
Sorted by Facility Name and Permit Number

CHEVRON USA INC	FAC #	**C 311**	TYPE: **TitleV**	EXPIRE ON:	12/31/2005
HEAVY OIL PRODUCTION	STATUS:	**A**	TOXIC ID: **40034**	AREA:	5 / 314
FRESNO COUNTY, CA	TELEPHONE:	**2099350831**		INSP. DATE:	05/12

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
C-311-13-9	2.7 MW TURBINE COGENERATOR	3020-08A C	1	1,533.00	1,533.00	A	86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-105, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-205, WITH A 36.4 MMBTU/HR COEN DUCT BURNER
C-311-15-9	2.7 MW TURBINE COGENERATOR	3020-08A C	1	1,533.00	1,533.00	A	86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-106, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-206 WITH A 36.4 MMBTU/HR COEN DUCT BURNER
C-311-19-13	58.5 MMBtu/hr	3020-02 H	1	1,030.00	1,030.00	A	DORMANT 58.5 MMBTU/HR SG 13-03 THERMOTICS STEAM GENERATOR, MODEL 5G-50-NDS-15, WITH NORTH AMERICAN GAS BURNER, MODEL 6131G-LO-NOX WITH FLUE GAS RECIRCULATION AND O2 CONTROLLER
C-311-20-15	58,500 KBTU/HR STEAM GENERATOR	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR NATURAL GAS-FIRED STRUTHERS THERMOFLOOD SG 13-04 STEAM GENERATOR WITH A NORTH AMERICAN GLE LOW-NOX BURNER WITH OXYGEN CONTROLLER
C-311-21-2	58,500 KBTU/HR STEAM GENERATOR	3020-02 H	1	1,030.00	1,030.00	A	58.5 MBTU/HR SG 13-5 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GAS AND OIL BURNER.
C-311-22-10	58,500 kBtu/hr	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 13-06 THERMOTICS STEAM GENERATOR, MODEL 5G-50-NDS-15, WITH A NORTH AMERICAN GAS BURNER, MODEL 6131G-CR-67.5 WITH FLUE GAS RECIRCULATION AND O2 CONTROLLER DESIGNATE AS DORMANT EMISSION UNIT(DEU)
C-311-23-9	58,500 kBtu/hr steam generator	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 13-07 THERMOTICS STEAM GENERATOR, MODEL 5G-50-NDS-15, WITH A NORTH AMERICAN GAS BURNER, MODEL 6131G-CR-67.5 WITH FLUE GAS RECIRCULATION AND O2 CONTROLLER DESIGNATE AS DORMANT EMISSION UNIT(DEU)
C-311-25-2	58,500 KBTU/HR STEAM GENERATOR	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 13-9 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN FLUE GAS RECIRCULATION SYSTEM.
C-311-27-13	58.5 MMBtu/hr	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #13-11, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE BURNER, EQUIPPED WITH FLUE GAS RECIRCULATION AND AN OXYGEN CONTROLLER
C-311-28-15	58.5 MMBTU/HR SG	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #13-12, MODEL OH-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION (FGR), AND AN OXYGEN CONTROLLER

Detailed Facility Report

For Facility=311 and excluding Deleted Permits
Sorted by Facility Name and Permit Number

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
C-311-30-15	62.5 MMBTU/HR SG	3020-02 H	1	1,030.00	1,030.00	A	62.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #13-14, MODEL OH-50-ND-16XAM, NATURAL GAS FIRED, WITH A NORTH AMERICAN GLE BURNER, AN OXYGEN CONTROLLER, AND A FLUE GAS RECIRCULATION (FGR) SYSTEM
C-311-36-14	58,500 KBTU/Hr	3020-02 H	1	1,030.00	1,030.00	A	DORMANT 58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR (SG #25-15), MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN 4131-G-LNX BURNER, FLUE GAS RECIRCULATION SYSTEM AND AN OXYGEN CONTROLLER SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS FROM SECTIONS 25D AND 6C ONLY
C-311-37-20	62.5 MMBtu/hr burner	3020-02 H	1	1,030.00	1,030.00	A	62.5 MMBTU/HR STRUTHERS THERMOFLOOD MODEL OH-50-ND-16XAM STEAM GENERATOR (#25-16) WITH A NORTH AMERICAN MODEL GLE LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS
C-311-38-19	58.5 MMBTU/HR SG	3020-02 H	1	1,030.00	1,030.00	A	DORMANT 58.5 MMBTU/HR SG 25-17 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GAS AND OIL BURNER AND FLUE GAS RECIRCULATION SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS
C-311-39-18	58.5 MMBTU/HR SG	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #25-18, MODEL OH-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GLE BURNER AND FLUE GAS RECIRCULATION SERVED BY THE 25D NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS
C-311-40-17	58,500 kBtu/hr burner	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR NATURAL GAS, LPG OR PROCESS GAS FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION SYSTEM, AN OXYGEN CONTROLLER, SERVED BY THE NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS (COMMON TO C-311-37) (SG-25-19)
C-311-41-14	58.5 MMBTU/HR SG	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 25-20 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GLE BURNER AND FLUE GAS RECIRCULATION SYSTEM, SERVED BY THE NEPTUNE AIRPOL CAUSTIC SCRUBBER WHEN FIRING WELL CASING AND/OR TANK VAPOR RECOVERY GAS
C-311-42-11	58,500 kBtu/hr steam generator	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 25-21 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN GAS BURNER, MODEL 4132-G-LNX WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)
C-311-43-10	58,500 kBtu/hr steam generator	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 25-22 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16AXM, WITH A NORTH AMERICAN 4131-6-LNX BURNER WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)

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PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
C-311-45-10	58,500 kBtu/hr steam generator	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 25-24 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16AXM, WITH A NORTH AMERICAN 4131-G-LNX BURNER WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)
C-311-46-9	58,500 kBtu/hr steam generator	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 25-25 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN 4131-G-LNX BURNER WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)
C-311-47-2	58,500 KBTU/HR STEAM GENERATOR	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 25-26 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16-XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131-G-LNX, AND A FLUE GAS RECIRCULATION SYSTEM.
C-311-48-2	58,500 KBTU/HR STEAM GENERATOR	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 25-27 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131, AND A FLUE GAS RECIRCULATION SYSTEM.
C-311-49-2	58,500 KBTU/HR STEAM GENERATOR	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 25-28 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131-G-LNX, AND A FLUE GAS RECIRCULATION SYSTEM.
C-311-50-2	58,500 KBTU/HR STEAM GENERATOR	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 25-29 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-DN-16XAM, WITH A NORTH AMERICAN BURNER, MODEL 4131-G-LNX, AND A GAS RECIRCULATION SYSTEM.
C-311-51-9	58,500 kBtu/hr steam generator	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG 6-31 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN 4131-G-LNX BURNER WITH FLUE GAS RECIRCULATION DESIGNATE AS DORMANT EMISSION UNIT(DEU)
C-311-52-17	58.5 MMBtu/hr steam generator	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR SG STRUTHERS THERMOFLOOD STEAM GENERATOR #6-32, MODEL 0H-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GLE LOW-NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND AN OXYGEN CONTROLLER
C-311-53-18	58.5 MMBtu/hr steam generator	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR STRUTHERS THERMOFLOOD STEAM GENERATOR #6-33, MODEL OH-50-ND-16XAM, EQUIPPED WITH A NORTH AMERICAN GLE LOW-NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND AN OXYGEN CONTROLLER
C-311-76-11	58.5 MMBtu/hr	3020-02 H	1	1,030.00	1,030.00	A	DORMANT 58.5 MMBTU/HR SG 6-38 STRUTHERS THERMOFLOOD STEAM GENERATOR, MODEL OH-50-ND-16XAM, WITH A NORTH AMERICAN 4131-G-LNX BURNER, AND FLUE GAS RECIRCULATION SYSTEM INCLUDING AN OXYGEN CONTROLLER
C-311-77-2	91 WELLS	3020-09 A	91	9.34	849.94	A	TEOR OPERATION WITH 91 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-2-13D WITH LOW PRESSURE SCRUBBER-SEPARATOR, AIR COOLER AND CONDENSATE COLLECTOR.

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PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
C-311-78-1	149 WELLS	3020-09 A	149	9.34	1,391.66	A	TEOR OPERATION WITH 149 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-4-13D WITH SCRUBBER, FIN-FAN AIR COOLER AND CONDENSATE COLLECTOR.
C-311-79-15	391 wells	3020-09 A	391	9.34	3,651.94	A	TEOR OPERATION #CC-1-25D SERVING 391 STEAM DRIVE WELLS WITH TWO 100 HP COMPRESSORS, SEPARATOR, CONDENSATE COLLECTOR AND PIPING FROM TEOR OPERATION #6C-CC-1 (C-311-112) AND PRESSURE VESSEL C-311-240
C-311-83-15	396 WELLS	3020-09 A	396	9.34	3,698.64	A	TEOR OPERATION WITH 396 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-3-13D WITH SCRUBBER, FIN-FAN AIR COOLER, COMPRESSOR, AND CONDENSATE COLLECTOR (SOUTHWEST)
C-311-84-14	58.5 MMBtu/hr	3020-02 H	1	1,030.00	1,030.00	A	58.5 MMBTU/HR STRUTHERS THERMOFLOOD (SG 6-37) MODELOH5O-ND-16XAM NATURAL GAS/LPG/TEOR GAS (COMMON TO C-311-37, SG 25-19) FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL MAGNA FLAME GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION
C-311-88-9	2.7 MW TURBINE COGENERATOR	3020-08A C	1	1,533.00	1,533.00	A	86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-104, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-204, WITH A 36.4 MMBTU/HR COEN DUCT BURNER
C-311-93-9	2.7 MW TURBINE COGENERATOR	3020-08A C	1	1,533.00	1,533.00	A	86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-101, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-201, WITH A 36.4 MMBTU/HR COEN DUCT BURNER
C-311-95-9	2.7 MW TURBINE COGENERATOR	3020-08A C	1	1,533.00	1,533.00	A	86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-102, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-202, WITH A 36.4 MMBTU/HR COEN DUCT BURNER
C-311-97-9	2.7 MW TURBINE COGENERATOR	3020-08A C	1	1,533.00	1,533.00	A	86.4 MMBTU/HR COGENERATION SYSTEM WITH A NOMINAL RATED 40.9 MMBTU/HR SOLAR MODEL CENTAUR 40-4500 TURBINE ENGINE #TG-103, DRIVING A 2.7 MW ELECTRICAL GENERATOR AND INCLUDING A STRUTHERS WASTE HEAT RECOVERY STEAM GENERATOR #SG-203, WITH A 36.4 MMBTU/HR COEN DUCT BURNER
C-311-105-2	118 CLOSED-VENT CYCLIC WELLS	3020-09 A	118	9.34	1,102.12	A	118 CLOSED-VENT CYCLIC WELLS.
C-311-106-1	20 CLOSED VENT STEAM DRIVE WEL	3020-09 A	20	9.34	186.80	A	20 CLOSED VENT STEAM DRIVE WELLS.
C-311-111-1	70 WELLS	3020-09 A	70	9.34	653.80	A	TEOR OPERATION WITH 70 STEAM DRIVE WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM #CC-1-13D WITH SEPARATOR, LOW PRESSURE AIR COOLER AND CONDENSATE COLLECTOR (SOUTHEAST)

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PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
C-311-112-11	326 wells with vapor recovery	3020-09 A	326	9.34	3,044.84	A	TEOR OPERATION #6C-CC-1 SERVING 20 AUTOMATIC WELL TESTERS AND 326 STEAM DRIVE WELLS WITH INLET SEPARATOR VESSEL, TWO FIN FAN EXCHANGERS, OUTLET SEPARATOR VESSEL, TWO CENTRIFUGAL TRANSFER PUMPS, MIST ELIMINATOR AND PIPING TO TEOR OPERATION #CC-1-25 (C-311-79)
C-311-114-2	23,000 KBTU/HR STEAM GENERATOR	3020-02 H	1	1,030.00	1,030.00	A	23 MMBTU/HR HOPPER STEAM GENERATOR, HSG-36, NATURAL GAS FIRED WITH ONE NORTH AMERICAN BURNER, DIS #21013-66.
C-311-117-2	23,000 KBTU/HR STEAM GENERATOR	3020-02 H	1	1,030.00	1,030.00	A	23 MMBTU/HR HOPPER STEAM GENERATOR, HSG-1, NATURAL GAS FIRED, WITH ONE NORTH AMERICAN BURNER, DIS #5702-66.
C-311-122-6	214,326 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #T-101: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129
C-311-123-6	214,326 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #T-102: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129
C-311-124-6	214,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #T-103: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129
C-311-125-6	84,500 GALLON TANK	3020-05 D	1	185.00	185.00	A	TANK #T-400: 84,546 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H, CAPACITY: 2,013 BBLS: SERVED BY SHARED VAPOR RECOVERY SYSTEM ON PERMIT UNIT C-311-129
C-311-126-6	214,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #T-300: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129
C-311-127-6	214,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #T-200: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39.0'D X 24.0'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129
C-311-128-6	127,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #T-201: 126,840 GALLON (3,020 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-129
C-311-129-8	216,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #T-500: 216,468 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 48'D X 16'H, SERVED BY A VAPOR RECOVERY SYSTEM INCLUDING CONDENSER, COMPRESSOR, CONDENSATE COLLECTION VESSEL, TRANSFER PUMP AND BACK-UP/STANDBY ELECTRIC COMPRESSOR SERVED BY SHARED CASING COLLECTION SYSTEM FOR SECTION 6C - PERMIT UNIT C-311-112 AND TANK PERMIT UNITS C-311-122, -123, -124, -125, -126, -127, -128 AND -129
C-311-142-1	24.5 KGAL STORAGE TANK #3369	3020-05 C	1	135.00	135.00	A	TANK #3369: 24,554 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 16'H, CAPACITY: 537 BBLS.
C-311-143-1	225.5 KGAL STORAGE TANK #3581	3020-05 E	1	246.00	246.00	A	TANK #3581: 225,546 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 24'H, CAPACITY: 5,368 BBLS.

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C-311-146-8	84,546 GALLON TANK	3020-05 D	1	185.00	185.00	A	TANK #13-23: 84,546 GALLON (2,013 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING (2) 50 HP COMPRESSOR, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM FOR PERMIT UNITS C-311-112, -146, -147, -150, -196, -197 AND -198
C-311-147-6	84,500 GALLON TANK	3020-05 D	1	185.00	185.00	A	TANK #13-22: 84,546 GALLON (2,013 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146
C-311-150-6	85,700 GALLON TANK	3020-05 D	1	185.00	185.00	A	TANK #13-18: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146
C-311-151-1	22800 GAL STORAGE TANK #T-200	3020-05 C	1	135.00	135.00	A	TANK I.D. NO. T-200, 544 BBL FIXED ROOF WEMCO SKIM STORAGE TANK (22' DIAMETER X 8' HEIGHT). CAPACITY: 22,800 GALLONS.
C-311-163-6	197,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #25-31: 197,274 GALLON (4,697 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 21'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
C-311-164-6	197,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #25-32: 197,274 GALLON (4,697 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 21'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
C-311-165-6	235,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #25-29: 234,864 GALLON (5,592 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 50'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
C-311-166-6	235,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #25-30: 234,864 GALLON (5,592 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 50'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
C-311-167-6	150,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #25-33: 150,318 GALLON (3,579 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
C-311-168-6	150,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #25-34: 150,318 GALLON (3,579 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
C-311-169-6	60,000 GALLON TANK	3020-05 D	1	185.00	185.00	A	TANK #25-60: 59,808 GALLON (1,424 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 26.5'D X 14.5'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
C-311-170-6	80,000 GALLON TANK	3020-05 D	1	185.00	185.00	A	TANK #25-37: 79,842 GALLON (1,901 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 8.5'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

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C-311-177-9	210,000 gallon	3020-05 E	1	246.00	246.00	A	TANK #25-42: 210,000 GALLON (5,047 BBL) FIXED ROOF FREE WATER KNOCK OUT TANK, 47.5'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING 50 HP COMPRESSOR AND 50 HP BACKUP COMPRESSOR, TWO VERTICAL SCRUBBERS, FIN FAN COOLER, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM WITH PERMIT UNITS C-311-163, -164, -165, -166, -167, -168, -169, -170 AND -177
C-311-180-1	19.7 KGAL STORAGE TANK #T-3	3020-05 B	1	93.00	93.00	A	TANK #T-3: 19,740 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 15.5'H, CAPACITY: 523 BBLS.
C-311-181-1	19.7 KGAL STORAGE TANK #T-4	3020-05 B	1	93.00	93.00	A	TANK #T-4: 19,740 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 15.5'H, CAPACITY: 523 BBLS.
C-311-182-1	11.3 KGAL STORAGE TANK #T-5	3020-05 B	1	93.00	93.00	A	TANK #T-5: 11,298 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15.5'D X 8'H, CAPACITY: 269 BBLS.
C-311-193-1	10.6 KGAL STORAGE TANK CO-T-57	3020-05 B	1	93.00	93.00	A	TANK #CO-T-57: 10,584 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15'D X 8'H, CAPACITY: 252 BBLS.
C-311-194-1	10.6 KGAL STORAGE TANK CO-T-58	3020-05 B	1	93.00	93.00	A	TANK #CO-T-58: 10,584 GALLON FIXED ROOF CRUDE OIL STORAGE TANK, 15'D X 8'H, CAPACITY: 252 BBLS.
C-311-196-6	210,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #13-29: 210,000 GALLON (5,000 BBL) FIXED ROOF WASH TANK, 38.37' D X 24' H, SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146
C-311-197-6	210,000 GALLON TANK	3020-05 E	1	246.00	246.00	A	TANK #13-30: 5,000 BBL FIXED ROOF WASH TANK, 38.75' D X 24'H, SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146
C-311-198-6	11,300 GALLON TANK	3020-05 B	1	93.00	93.00	A	TANK #13-13: 11,300 GALLON FIXED ROOF SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146
C-311-205-1	20 OPEN-VENT CYCLIC WELLS.	3020-09 A	20	9.34	186.80	A	20 OPEN-VENT CYCLIC WELLS.
C-311-215-1	42 KGAL TANK #24-1	3020-05 C	1	135.00	135.00	A	42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-1, 21'D X 16'H.
C-311-216-1	42 KGAL TANK #24-2	3020-05 C	1	135.00	135.00	A	42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK 24-2, 21'D X 16'H.
C-311-217-1	84 KGAL TANK #24-3	3020-05 D	1	185.00	185.00	A	84,000 GALLONS (2,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-3, 30'D X 16'H.
C-311-219-1	42 KGAL TANK #24-5	3020-05 C	1	135.00	135.00	A	42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK 24-5, 21'D X 16'H.
C-311-220-1	42 KGAL TANK #24-6	3020-05 C	1	135.00	135.00	A	42,000 GALLON (1,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-6, 21'D X 16'H.
C-311-221-1	84 KGAL TANK #24-7	3020-05 D	1	185.00	185.00	A	84,000 GALLON (2,000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-7, 30'D X 16'H.

Detailed Facility Report

For Facility=311 and excluding Deleted Permits
Sorted by Facility Name and Permit Number

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
C-311-222-4	126,000 GALLON WASH TANK #24-9	3020-05 E	1	246.00	246.00	A	126,000 GALLON (3000 BBLS) CONE BOTTOM WASH TANK #24-9, 24' HEIGHT X 30' DIAMETER
C-311-223-1	42,000 GAL STORAGE TANK #24-10	3020-05 C	1	135.00	135.00	A	42,000 GALLON (1000 BBLS) FIXED ROOF CRUDE OIL STORAGE TANK #24-10, 21'D X 16'H.
C-311-226-1	126,000 GALLONS	3020-05 E	1	246.00	246.00	A	126,000-GALLON (3000 BBLS) FIXED ROOF TANK (NEW TANK), 24' HEIGHT X 30' DIAMETER
C-311-227-0	1 Nozzle	3020-11 A	1	34.00	34.00	A	ONE 2,000 GALLON ABOVE GROUND STORAGE TANK SERVED BY TWO-POINT PHASE I VAPOR RECOVERY SYSTEM AND ONE FUELING POINT WITH ONE GASOLINE DISPENSING NOZZLE SERVED BY BALANCE PHASE II VAPOR RECOVERY SYSTEM (G-70-116-A).
C-311-228-0	46 TEOR WELLS	3020-09 A	46	9.34	429.64	A	MS-716, VAPOR RECOVERY PLANT, FOR WELL CASING HEAD HYDROCARBON VAPOR RECOVERY, UTILIZING THE FOLLOWING EQUIPMENT: 11V1 LIQUID SCRUBBER; 10E1 GAS WATER COOLER; 10V2 CONDENSATE KO DRUM; 10P1 CONDENSATE PUMP SERVING 46 WELLS.
C-311-229-0	42,000 gal	3020-05 C	1	135.00	135.00	A	42,000 GALLON (1,000 BBL) FIXED ROOF CRUDE OIL TANK (#T-1432) WITH DIAMETER 21', HEIGHT 16'
C-311-230-0	42,000 gal	3020-05 C	1	135.00	135.00	A	42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK (#T-9729) WITH DIAMETER 21', HEIGHT 16'
C-311-231-0	42,000 gal	3020-05 C	1	135.00	135.00	A	42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK (#T-9731) WITH DIAMETER 21', HEIGHT 16'
C-311-232-0	42,000 gal	3020-05 C	1	135.00	135.00	A	42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK WITH DIAMETER 21', HEIGHT 16'
C-311-233-0	42,000 gal	3020-05 C	1	135.00	135.00	A	42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK WITH DIAMETER 21', HEIGHT 16'
C-311-234-0	42,000 gal	3020-05 C	1	135.00	135.00	A	42,000 GALLON (1000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK WITH DIAMETER 21', HEIGHT 16'
C-311-235-0	600 bhp IC engine	3020-10 D	1	479.00	479.00	A	600 BHP CUMMINGS MODEL #KTA19C52 (SERIAL #31134968) DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR
C-311-237-1	126,000 gallon tank	3020-05 E	1	246.00	246.00	A	TANK #T-7: 126,000 GALLON (3,000 BBL) FIXED ROOF CRUDE OIL STORAGE/WASH TANK (30'D X 24'H) WITH PV VALVE
C-311-240-1	25,200 gallons	3020-05 C	1	135.00	135.00	A	600 BBL PRESSURE VESSEL VENTED TO TEOR OPERATION C-311-79

Number of Facilities Reported: 1

ATTACHMENT D

District Rule 4401 Stringency Analysis

Stringency Comparison of District Rule 4401 Non-SIP Version (6/16/2011) to Current SIP Version (12/14/2006)

Requirement Category	SIP Version of Rule 4401 (12/14/2006)	Non-SIP Version of Rule 4401 (6/16/2011)	Conclusion
2.0 Applicability	2.0 This rule is applicable to all steam-enhanced crude oil production wells and any associated vapor collection and control systems.	2.0 This rule is applicable to all steam-enhanced crude oil production wells and any associated vapor collection and control systems.	**No change in applicability, therefore, non-SIP version of rule is as stringent as SIP version.**
4.0 Exemptions	4.1 Any steam-enhanced crude oil production well undergoing service or repair during the time the well is not producing.	4.1 Any steam-enhanced crude oil production well undergoing service or repair during the time the well is not producing.	**No change in exemption, therefore, non-SIP version of rule is as stringent as SIP version.**
	4.2 Effective until December 31, 2008, the requirements of this rule for cyclic wells shall not apply to the first 100 cyclic wells of a small producer.		**This exemption is obsolete and removed from the non-SIP version of the rule. Therefore, non-SIP version of rule is as stringent as SIP version**
	4.3 The requirements of this rule for cyclic wells shall not apply to up to 40 wells owned by a company and undergoing pilot testing provided; 4.3.1 the production zone on that property has not been injected with steam during the preceding two (2) years, 4.3.2 the well is located more than 1000 feet from an existing well vent vapor collection and control system operated by the company, and 4.3.3 the operation is under District permit.	4.2 The requirements of this rule for cyclic wells shall not apply to up to 40 wells owned by a company and undergoing pilot testing provided; 4.2.1 the production zone on that property has not been injected with steam during the preceding two (2) years, 4.2.2 the well is located more than 1000 feet from an existing well vent vapor collection and control system operated by the company, and 4.2.3 the operation is under District permit.	**No change in exemption, therefore, non-SIP version of rule is as stringent as SIP version.**
	4.4 The requirements of this rule shall not apply to up to 40 cyclic wells owned by a company and undergoing well stimulation, provided; 4.4.1 the well is located more than 1000 feet from an existing well vent vapor collection and control system operated by the company, and 4.4.2 the operation is under District permit.	4. 3 The requirements of this rule shall not apply to up to 40 cyclic wells owned by a company and undergoing well stimulation, provided; 4.3.1 the well is located more than 1000 feet from an existing well vent vapor collection and control system operated by the compny, and 4.3.2 the operation is under District permit.	**No change in exemption, therefore, non-SIP version of rule is as stringent as SIP version.**
4.0 Exemptions (continued)	4.5 Effective until December 31, 2008, the requirements of this rule shall not apply to up to 20 cyclic wells owned by a company in each stationary source as defined in Rule 2201 (New and Modified Stationary Source Review Rule), provided the requirements of Section 4.5.1 and Section 4.5.2 are met. Effective on and after January 1, 2009, the requirements of this rule shall not apply to up to five (5) cyclic wells owned by a company that is not a small producer, in each stationary source as defined in Rule 2201 (New and Modified Stationary Source Review Rule), and up to 20 cyclic wells owned by a small producer, provided the requirements of Section 4.5.1 and Section 4.5.2 are met. 4.5.1 the well is located more than 1000 feet from an existing well vent vapor control system operated by the company, and 4.5.2 the operation is under District permit.	4.4 The requirements of this rule shall not apply to up to five (5) cyclic wells owned by a company that is not a small producer, in each stationary source as defined in Rule 2201 (New and Modified Stationary Source Review Rule), and up to 20 cyclic wells owned by a small producer, provided the requirements of Section 4.5.1 and Section 4.5.2 are met. 4.4.1 the well is located more than 1000 feet from an existing well vent vapor control system operated by the company, and 4.4.2 the operation is under District permit.	**No change in exemption, therefore, non-SIP version of rule is as stringent as SIP version.**

Requirement Category	SIP Version of Rule 4401 (12/14/2006)	Non-SIP Version of Rule 4401 (6/16/2011)	Conclusion
	4.6 . Effective until December 31, 2008, the requirements of this rule shall not apply to the first ten (10) wells of a small producer that are responding to steam injected from an operator other than themselves and where no contractual agreement for injected steam exists, and provided the small producer meets the following conditions: 4.6.1 A list of wells that are exempted by Section 4.6 shall be submitted to the APCO by July 15, 1998. 4.6.2 Source testing of the well vent that is nearest to the steam injection well shall be conducted by January 15, 2001 in order to determine its VOC mass emission rate. Source testing shall be conducted in accordance with Section 6.3.4.		**This exemption has been removed in the non-SIP version of the rule since it is obsolete.** **Therefore, non-SIP version of rule is as stringent as SIP version.**
4.0 Exemptions (continued)	4.7 The requirements of this rule shall not apply to components serving the produced fluid line.	4.5 The requirements of this rule shall not apply to components serving the produced fluid line.	**No change in exemption, therefore, non-SIP version of rule is as stringent as SIP version.**
	4.8 Except for complying with the applicable requirements of Section 6.1, Section 6.6.6 and Section 7.2, the requirements of this rule shall not apply to components described in Section 4.8.1 through Section 4.8.4. An operator claiming an exemption pursuant to Section 4.8 shall provide proof of the applicable criteria to the satisfaction of the APCO. 4.8.1 Pressure relief devices, pumps, and compressors that are enclosed and whose emissions are controlled with an operating VOC collection and control system as defined in Section 3.0. 4.8.2 Components buried below ground. 4.8.3 Components used exclusively in vacuum service. 4.8.4 One-half inch nominal or less stainless steel tube fittings which have been demonstrated to the APCO to be leak-free based on initial inspection using the test method specified in Section 6.3.3.	4.6 Except for complying with the applicable requirements of Section 6.1, Section 6.6.6 and Section 7.2, the requirements of this rule shall not apply to components described in Section 4.6.1 through Section 4.6.4. An operator claiming an exemption pursuant to Section 4.6 shall provide proof of the applicable criteria to the satisfaction of the APCO. 4.6.1 Pressure relief devices, pumps, and compressors that are enclosed and whose emissions are controlled with an operating VOC collection and control system as defined in Section 3.0. 4.6.2 Components buried below ground. 4.6.3 Components used exclusively in vacuum service. 4.6.4 One-half inch nominal or less stainless steel tube fittings which have been demonstrated to the APCO to be leak-free based on initial inspection using the test method specified in Section 6.3.3.	**No change in exemption, therefore, non-SIP version of rule is as stringent as SIP version.**
	4.9 Effective on and after January 1, 2009, the requirements of Section 5.8.1 through Section 5.8.5 of this rule shall not apply to components exclusively handling 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 6.3.5.	4.7 The requirements of Section 5.4.1 through Section 5.4.7 of this rule shall not apply to components exclusively handling 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.	**No change in exemption, therefore, non-SIP version of rule is as stringent as SIP version.**
5.0 Requirements	Section 5.1 through Section 5.4 shall be effective until December 31, 2008. Section 5.5 through Section 5.9 shall be effective on and after January 1, 2009.		**Sections 5.1 through 5.4 of the SIP Approved version are obsolete. Therefore these requirements were not included in the Non-SIP version .** **Note: Since sections 5.1 through 5.4 of the SIP approved version is obsolete it will not be discussed in this evaluation.**

Requirement Category	SIP Version of Rule 4401 (12/14/2006)	Non-SIP Version of Rule 4401 (6/16/2011)	Conclusion
	5.5 An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with the requirements of either Section 5.5.1 or Section 5.5.2. 5.5.1 The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0. 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. 5.5.2 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.	5.1 An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with the requirements of either Section 5.5.1 or Section 5.5.2. 5.1.1 The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0. 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. 5.1.2 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.	**No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version.**
5.0 Requirements (continued)	5.6 Determination of Compliance with the Leak Standards 5.6.1 An operator shall be in violation of this rule if any District inspection demonstrates that one or more of the conditions in Section 5.6.2 exist at the facility or if any operator inspection conducted pursuant to Section 5.8 demonstrates that one or more of the conditions in Section 5.6.2 exist at the facility. 5.6.2 Leak Standards The following conditions shall be used for determination of violation during an inspection pursuant to the provisions of Section 5.6.1: 5.6.2.1 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 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. 5.6.2.2 Existence of a component with a major liquid leak as defined in Section 3.0. 5.6.2.3 Existence of a component with a gas leak greater than 50,000 ppmv. 5.6.2.4 Existence of a component leak described in Section 5.6.2.4.1 through Section 5.6.2.4.3 in excess of the allowable number of leaks specified in Table 3. 5.6.2.4.1 A minor liquid leak, or 5.6.2.4.2 A minor gas leak, or 5.6.2.4.3 A gas leak greater than 10,000 ppmv up to 50,000 ppmv.	5.2 Determination of Compliance with the Leak Standards 5.2.1 An operator shall be in violation of this rule if any District inspection demonstrates that one or more of the conditions in Section 5.2.2 exist at the facility or if any operator inspection conducted pursuant to Section 5.4 demonstrates that one or more of the conditions in Section 5.2.2 exist at the facility. 5.2.2 Leak Standards The following conditions shall be used for determination of violation during an inspection pursuant to the provisions of Section 5.6.1: 5.2.2.1 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 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. 5.2.2.2 Existence of a component with a major liquid leak as defined in Section 3.0. 5.2.2.3 Existence of a component with a gas leak greater than 50,000 ppmv. 5.2.2.4 Existence of a component leak described in Section 5.6.2.4.1 through Section 5.6.2.4.3 in excess of the allowable number of leaks specified in Table 2. 5.6.2.4.1 A minor liquid leak, or 5.2.2.4.2 A minor gas leak, or 5.2.2.4.3 A gas leak greater than 10,000 ppmv up to 50,000 ppmv.	**No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version.**

<table>
<tr><th>Requirement Category</th><th>SIP Version of Rule 4401 (12/14/2006)</th><th>Non-SIP Version of Rule 4401 (6/16/2011)</th><th>Conclusion</th></tr>
<tr><td></td><td>Table 3 Number of Allowable Leaks
<table>
<tr><th>Number of Steam-Enhanced Crude Oil Production Wells Connected to a VOC Collection and Control System</th><th>Number of Allowable Leaks</th></tr>
<tr><td>1 to 25</td><td>3</td></tr>
<tr><td>26 to 50</td><td>6</td></tr>
<tr><td>51 to 100</td><td>8</td></tr>
<tr><td>101 to 250</td><td>10</td></tr>
<tr><td>251 to 500</td><td>15</td></tr>
<tr><td>More than 500</td><td>One (1) for each 20 wells tested with a minimum of 50 wells tested.</td></tr>
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</table></td><td></td></tr>
<tr><td>5.0 Requirements (continued)</td><td>5.7 An operator shall comply with the following operating requirements:

5.7.1 An operator shall not use any component with a leak as defined in Section 3.0, or that is found to be in violation of the provisions of Section 5.6.2. 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 this rule.

5.7.2 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.

5.7.3 An operator shall comply with the requirements of Section 6.7 if there is any change in the description of major components or critical components.</td><td>5.3 An operator shall comply with the following operating requirements:

5.3.1 An operator shall not use any component with a leak as defined in Section 3.0, or that is found to be in violation of the provisions of Section 5.6.2. 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 this rule.

5.3.2 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.

5.3.3 An operator shall comply with the requirements of Section 6.7 if there is any change in the description of major components or critical components.</td><td>No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version.</td></tr>
</table>

Requirement Category	SIP Version of Rule 4401 (12/14/2006)	Non-SIP Version of Rule 4401 (6/16/2011)	Conclusion
5.0 Requirements (continued)	**5.8 Inspection and Re-inspection Requirements** Unless otherwise specified, an operator shall perform all component inspections and gas leak measurements pursuant to the requirements of Section 6.3.3. 5.8.1 Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 at least once every year. 5.8.2 An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of this rule. 5.8.3 In addition to the inspections required by Section 5.8.1, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: 5.8.3.1 An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. 5.8.3.2 Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of this rule. 5.8.4 In addition to the inspections required by Section 5.8.1, Section 5.8.2 and Section 5.8.3, an operator shall perform the following inspections: 5.8.4.1 An operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. An operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. 5.8.4.2 An operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. 5.8.4.3 Except for PRDs subject to the requirements of Section 5.8.4.1, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. 5.8.5 An operator shall inspect all unsafe-to-monitor components during each turnaround. 5.8.6 A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator.	**5.4 Inspection and Re-inspection Requirements** Unless otherwise specified, an operator shall perform all component inspections and gas leak measurements pursuant to the requirements of Section 6.3.3. 5.4.1 Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 at least once every year. 5.4.2 An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of this rule. 5.4.3 In addition to the inspections required by Section 5.4.1, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: 5.4.3.1 An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. 5.4.3.2 Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of this rule. 5.4.4 In addition to the inspections required by Section 5.4.1, Section 5.8.2 and Section 5.8.3, an operator shall perform the following inspections: 5.4.4.1 An operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. An operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. 5.4.4.2 An operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. 5.4.4.3 Except for PRDs subject to the requirements of Section 5.4.4.1, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. 5.4.5 An operator shall inspect all unsafe-to-monitor components during each turnaround. 5.4.6 A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator.	**No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version.**

Requirement Category	SIP Version of Rule 4401 (12/14/2006)	Non-SIP Version of Rule 4401 (6/16/2011)	Conclusion
5.0 Requirements (continued)	**5.9 Leak Repair Requirements** 5.9.1 An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. An operator shall include the following information on the tag: 5.9.1.1 The date and time of leak detection. 5.9.1.2 The date and time of leak measurement. 5.9.1.3 For a gaseous leak, the leak concentration in ppmv. 5.9.1.4 For a liquid leak, whether it is a major liquid leak or a minor liquid leak. 5.9.1.5 Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. 5.9.2 An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: 5.9.2.1 Repaired or replaced the leaking component, and 5.9.2.2 Re-inspected the component using the test method in Section 6.3.3, and 5.9.2.3 The component is found to be in compliance with the requirements of this rule. 5.9.3 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 hour after detection of the leak. 5.9.4 Except for leaking critical components or leaking essential components subject to the requirements of Section 5.9.7, 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 requirements of Section 5.9.4.1, Section 5.9.4.2, or Section 5.9.4.3 as soon as practicable but not later than time period specified in Table 4. 5.9.4.1 Repair or replace the leaking component; or 5.9.4.2 Vent the leaking component to a VOC collection and control system as defined in Section 3.0, or 5.9.4.3 Remove the leaking component from operation. 5.9.5 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 4. 5.9.6 The time of the initial leak detection shall be the start of the repair period specified in Table 4 5.9.7 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.	**5.5 Leak Repair Requirements** 5.5.1 An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. An operator shall include the following information on the tag: 5.5.1.1 The date and time of leak detection. 5.5.1.2 The date and time of leak measurement. 5.5.1.3 For a gaseous leak, the leak concentration in ppmv. 5.5.1.4 For a liquid leak, whether it is a major liquid leak or a minor liquid leak. 5.5.1.5 Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. 5.5.2 An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: 5.5.2.1 Repaired or replaced the leaking component, and 5.5.2.2 Re-inspected the component using the test method in Section 6.3.3, and 5.5.2.3 The component is found to be in compliance with the requirements of this rule. 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 hour after detection of the leak. 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 requirements of Section 5.5.4.1, Section 5.5.4.2, or Section 5.5.4.3 as soon as practicable but not later than time period specified in Table 3. 5.5.4.1 Repair or replace the leaking component; or 5.5.4.2 Vent the leaking component to a VOC collection and control system as defined in Section 3.0, or 5.5.4.3 Remove the leaking component from operation. 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. 5.5.6 The time of the initial leak detection shall be the start of the repair period specified in Table 3 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	**No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version.**

Requirement Category	SIP Version of Rule 4401 (12/14/2006)	Non-SIP Version of Rule 4401 (6/16/2011)	Conclusion
6.0 Administrative Requirements	**6.1 Recordkeeping and Submissions** An operator shall maintain the records required by Sections 6.1 and Section 6.2 for a period of five (5) years. These records shall be made available to the APCO, California Air Resources Board (ARB), and EPA upon request. 6.1.1 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. 6.1.2 Effective January 15, 1998, 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. 6.1.3 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. 6.1.4 Effective until December 31, 2008, the results of source tests conducted pursuant to Section 4.6.2 shall be submitted to the APCO within 60 days after the completion of the source test. 6.1.5 Effective on and after January 1, 2009, the inspection log maintained pursuant to Section 6.4. 6.1.6 Effective on and after January 1, 2009, 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. 6.1.7 Effective on and after January 1, 2009, an operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5. 6.1.8 Effective on and after January 1, 2009, an operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. 6.1.9 An operator shall submit to the APCO not later than June 14, 2007 a list of all gauge tanks, as defined in Section 3.17. 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. 6.1.10 The results of gauge tank TVP testing conducted pursuant to Section 6.2.5 shall be submitted to the APCO within 60 days after the completion of the testing. 6.1.11 Effective on and after January 1, 2007, 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.	**6.1 Recordkeeping and Submissions** An operator shall maintain the records required by Section 6.1 and Section 6.2 for a period of five (5) years. These records shall be made available to the APCO, California Air Resources Board (ARB), and EPA upon request. 6.1.1 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. 6.1.2 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. 6.1.3 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. 6.1.4 The inspection log maintained pursuant to Section 6.4. 6.1.5 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. 6.1.6 An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5. 6.1.7 An operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. 6.1.8 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. 6.1.9 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. 6.1.10 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 of the release to the APCO no later than 60 days after the end of the calendar year.	**No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version.**

Requirement Category	SIP Version of Rule 4401 (12/14/2006)	Non-SIP Version of Rule 4401 (6/16/2011)	Conclusion
6.0 Administrative Requirements (continued)	**6.2 Compliance Source Testing** 6.2.1 An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. 6.2.2 If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. 6.2.3 If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 for a vapor control system which does not have a VOC destruction device. 6.2.4 An operator seeking approval pursuant to Section 6.2.2 or Section 6.2.3 shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. 6.2.5 An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17: 6.2.5.1 Conduct an initial TVP testing of the produced fluid in each gauge tank not later than June 14, 2007. 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. 6.2.5.2 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 6.1.10.	6.2 Compliance Source Testing 6.2.1 An operator shall source test annually all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. 6.2.2 If approved by the APCO, a VOC collection and control system is not subject to Section 6.2.1 if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the requirements in Sections 6.2.2.1 through 6.2.2.3. 6.2.2.1 An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines – Phase 2); or 6.2.2.2 A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters – 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters – 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 6.2.2.3 A unit subject to District Rule 4311 (Flares). 6.2.3 An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0: 6.2.3.1 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. 6.2.3.2 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.	**No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version..**
6.0 Administrative Requirements (continued)	**6.3 Test Methods** Test methods that are equivalent to those test methods specified in Section 6.3.1 through Section 6.3.5 may be used provided that such equivalent test methods have been previously approved, in writing, by the EPA, ARB, and the APCO. 6.3.1 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	**6.3 Test Methods** Test methods that are equivalent to those test methods specified in Section 6.3.1 through Section 6.3.4 may be used provided that such equivalent test methods have been previously approved, in writing, by the EPA, ARB, and the APCO. 6.3.1 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	**No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version.**

Requirement Category	SIP Version of Rule 4401 (12/14/2006)	Non-SIP Version of Rule 4401 (6/16/2011)	Conclusion
	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. 6.3.2 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. 6.3.3 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. 6.3.4 Effective until December 31, 2008, for the purpose of Section 4.6.2, the VOC mass emission rate shall be determined according to the procedures described in the document USEPA-909/9-81-003, September 1981, entitled "Assessment of VOC Emissions from Well Vents Associated with Thermally Enhanced Oil Recovery". 6.3.5 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.	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. 6.3.2 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. 6.3.3 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. 6.3.4 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.	
6.0 Administrative Requirements (continued)	**6.4 Inspection Log** Effective on and after January 1, 2009, an operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: 6.4.1 The total number of components inspected, and the total number and percentage of leaking components found by component type. 6.4.2 The location, type, and name or description of each leaking component and description of any unit where the leaking component is found. 6.4.3 The date of leak detection and the method of leak detection. 6.4.4 For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. 6.4.5 The date of repair, replacement, or removal from operation of	**6.4 Inspection Log** An operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: 6.4.1 The total number of components inspected, and the total number and percentage of leaking components found by component type. 6.4.2 The location, type, and name or description of each leaking component and description of any unit where the leaking component is found. 6.4.3 The date of leak detection and the method of leak detection. 6.4.4 For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. 6.4.5 The date of repair, replacement, or removal from operation	**No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version.**

Requirement Category	SIP Version of Rule 4401 (12/14/2006)	Non-SIP Version of Rule 4401 (6/16/2011)	Conclusion
	leaking components. 6.4.6 The 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. 6.4.7 The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier. 6.4.8 The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced. 6.4.9 The inspector's name, business mailing address, and business telephone number. 6.4.10 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.	of leaking components. 6.4.6 The 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. 6.4.7 The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier. 6.4.8 The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced. 6.4.9 The inspector's name, business mailing address, and business telephone number. 6.4.10 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.	
	6.5 Employee Training Program Effective on and after January 1, 2009, an operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary.	**6.5 Employee Training Program** An operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary.	**No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version.**
6.0 Administrative Requirements (continued)	**6.6 Operator Management Plan** By June 30, 2008, 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 below. The Operator Management Plan shall include, at a minimum, all of the following information: 6.6.1 A description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt pursuant to Section 4.0 of this rule. 6.6.2 Identification and description of any known hazard that might affect the safety of an inspector. 6.6.3 Except for pipes, the number of components that are subject to this rule by component type. 6.6.4 Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation. 6.6.5 Except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description). 6.6.6 Except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be	**6.6 Operator Management Plan** By June 30, 2008, 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 below. The Operator Management Plan shall include, at a minimum, all of the following information: 6.6.1 A description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt pursuant to Section 4.0 of this rule. 6.6.2 Identification and description of any known hazard that might affect the safety of an inspector. 6.6.3 Except for pipes, the number of components that are subject to this rule by component type. 6.6.4 Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation. 6.6.5 Except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description). 6.6.6 Except for pipes, components exempt pursuant to Section 4.6 (except for components buried below ground) may be	**No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version.**

Requirement Category	SIP Version of Rule 4401 (12/14/2006)	Non-SIP Version of Rule 4401 (6/16/2011)	Conclusion
	described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 shall be submitted with the Operator Management Plan. 6.6.7 A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by this rule will be performed by a qualified contractor or by an in-house team. 6.6.8 A description of the training standards for personnel that inspect and repair components. 6.6.9 A description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary. 6.7 By January 30 of each year after 2008, an operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to an existing Operator Management Plan. 6.8 The APCO shall provide written notice to the operator of the approval or incompleteness of a new or revised Operator Management Plan within 60 days of receiving such Operator Management Plan. If the APCO fails to respond in writing within 60 days after the date of receiving the Operator Management Plan, it shall be deemed approved. No provision of the Operator Management Plan, approved or not, shall conflict with or take precedence over any provision of this rule.	described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Section 4.6 shall be submitted with the Operator Management Plan. 6.6.7 A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by this rule will be performed by a qualified contractor or by an in-house team. 6.6.8 A description of the training standards for personnel that inspect and repair components. 6.6.9 A description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary. 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. 6.8 The APCO shall provide written notice to the operator of the approval or incompleteness of a new or revised Operator Management Plan within 60 days of receiving such Operator Management Plan. If the APCO fails to respond in writing within 60 days after the date of receiving the Operator Management Plan, it shall be deemed approved. No provision of the Operator Management Plan, approved or not, shall conflict with or take precedence over any provision of this rule.	
7.0 Compliance Schedule	**7.0 Compliance Schedule** 7.1 The operator of any new steam-enhanced crude oil production well, or any non-steam-enhanced crude oil production well converted to a steam-enhanced crude oil production well, which commences steam-enhancement operations on or after April 11, 1991, shall comply with the requirements of this rule and the applicable permit requirements of Rule 2201 (New and Modified Stationary Source Review Rule) before steam injection and no later than the first detectable flow at the casing vent. 7.2 Steam-enhanced crude oil production wells and components that are exempt pursuant to Section 4.3, 4.4, 4.5, 4.8 or 4.9 that become subject to this rule through loss of exemption status shall not be operated until such time that they are in full compliance with the requirements of this rule. 7.3 Effective on and after January 1, 2009, an operator shall be in full compliance with the requirements of this rule, unless otherwise specified in the provisions of this rule	**7.0 Compliance Schedule** 7.1 The operator of any new steam-enhanced crude oil production well, or any nonsteam- enhanced crude oil production well converted to a steam-enhanced crude oil production well shall comply with the requirements of this rule and the applicable permit requirements of Rule 2201 (New and Modified Stationary Source Review Rule) before steam injection and no later than the first detectable flow at the casing vent. 7.2 Steam-enhanced crude oil production wells and components that are exempt pursuant to Section 4.2, 4.3, 4.4, 4.6, or 4.7 that become subject to this rule through loss of exemption status shall not be operated until such time that they are in full compliance with the requirements of this rule.	**No change in requirement, therefore, non-SIP version of rule is as stringent as SIP version.**

Overall Conclusion:

As analyzed above, each amended section of the non-SIP version of the rule is at least as stringent as, or more stringent than the corresponding section of the SIP version of the rule. Therefore, it is concluded that overall the non-SIP version of the rule is more stringent than the SIP version of the rule.