



APR 16 2010

Ms. Adean Valenzuela
Aera Energy LLC
PO Box 11164
Bakersfield, CA 93389-1164

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1547
Project # 1094359**

Dear Ms. Valenzuela:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. The applicant is requesting that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project revises the startup and shutdown record-keeping requirement from all startups and shutdowns to only startup and shutdowns exceeding one hour in duration for three heater treaters.

After addressing any EPA comments made during the 45-day comment period, the Authorities to Construct will be issued to the facility with Certificates of Conformity. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: RE/cm

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
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San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



APR 16 2010

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St.
San Francisco, CA 94105

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1547
Project # 1094359**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Aera Energy LLC within the western Kern County fields, which has been issued a Title V permit. Aera Energy LLC is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The project revises the startup and shutdown record-keeping requirement from all startups and shutdowns to only startup and shutdowns exceeding one hour in duration for three heater treaters.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authorities to Construct # S-1547-994-15, '-999-17, and '-1006-14 with Certificates of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
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San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

APR 16 2010

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

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1547
Project # 1094359**

Dear Mr. Tollstrup:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. The applicant is requesting that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project revises the startup and shutdown record-keeping requirement from all startups and shutdowns to only startup and shutdowns exceeding one hour in duration for three heater treaters.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authorities to Construct # S-1547-994-15, '-999-17, and '-1006-14 with Certificates of Conformity. After demonstrating compliance with the Authorities to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 30-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: RE/cm

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**NOTICE OF PRELIMINARY DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed modification of Aera Energy LLC for its heavy oil production stationary source within the western Kern County fields, California. The project revises the startup and shutdown record-keeping requirement from all startups and shutdowns to only startup and shutdowns exceeding one hour in duration for three heater treaters.

The District's analysis of the legal and factual basis for this proposed action, project #1094359, is available for public inspection at the District office at the address below. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested by the public, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.

Permittee shall maintain records of duration of each startup and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records available for District inspection upon request. [District Rule 4307]

Additionally, a DEL for VOC was erroneously not included on the S-1547-1006 PTO and is added in this project. This change is considered administrative.

The revision of the Rule 4307 recordkeeping requirement and addition of the VOC DEL is not a NSR modification. Therefore the requirements of BACT and offsets do not need to be considered. However, the project triggers public notice as explained below.

Disposition of Outstanding ATCs

ATCs S-1547-994-13, '-999-15, and '-1006-13 which authorized the addition of a variable frequency drive (VFD) rheostat to combustion air blower motor have not been implemented. Current PTOs '-994-14, '-999-16, and '-1006-11 are included in **Attachment I**.

Aera received their Title V Permit on January 31, 2003. District Rule 2520 Section 3.20.2 states that minor permit modifications do not relax monitoring, reporting, or record-keeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions. Requiring record-keeping of only startup and shutdowns that exceed the time limits of Rule 4307 (and not all startup and shutdowns as previously required) is a relaxation of recordkeeping requirements and therefore is a significant permit modification.

The facility has specifically requested that this project be processed with a Certificate of Conformity (COC), therefore the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Aera must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (09/21/06)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4305	Boilers, Steam Generators and Process Heaters – Phase II (8/21/03) – not applicable - heat input rating is < 5 MMBtu/hr
Rule 4306	Boilers, Steam Generators and Process Heaters – Phase III (3/17/05) – not applicable - heat input rating is < 5 MMBtu/hr
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr – not applicable - heat input rating is < 5 MMBtu/hr
Rule 4307	Boilers, Steam Generators, And Process Heaters – 2.0 MMBtu/hr to 5.0 MMBtu/hr (10/16/08)

Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The heater treaters are located in the Aera's heavy oil production stationary source in the western Kern County fields at NE Section 14, T31S, R22E (S-1547-995 and '-999) and NE Section 35, T12N, R24E (S-1547-1006). The heater treaters are not located within 1000 feet of any K-12 school. Therefore, a school notice pursuant to CH&SC 41700 is not required.

IV. Process Description

Aera Energy conducts thermally enhanced oil recovery. The heater treaters being modified by this project receive produced fluids consisting of vapors, oil, and water. The heater treaters separate the produced fluids, the vapors are sent to the vapor recovery system listed on S-1547-865 and the liquids are sent to storage tanks for further separation.

V. Equipment Listing

Pre/Post¹-Project Equipment Description:

S-1547-994-14, '-15: 4.2 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND VAPOR CONTROL LISTED ON S-1547-865 (NORTH MIDWAY)

S-1547-999-16, '-17: 5 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND SERVED BY VAPOR CONTROL LISTED ON S-1547-865 (NORTH MIDWAY UNIT B-101C - ALBERTA SHALE LEASE)

S-1547-1006-11, '-14: 5 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND A FLUID TREATMENT CHAMBER SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '-853, '-882, '-883, '-884, '-1005 TO '-1011, AND '-1025) - SOUTH MIDWAY

¹ Equipment descriptions are not changing as a result of these modifications for any units.

Proposed Modifications:

S-1547-994-15, '-999-17, and '-1006-14: REVISE RECORDKEEPING REQUIREMENT FROM ALL STARTUPS AND SHUTDOWNS TO ONLY STARTUPS AND SHUTDOWNS THAT EXCEED ONE HOUR IN DURATION

S-1547-1006-14: ADD VOC DEL

VI. Emission Control Technology Evaluation

The heater treaters emit NO_x, CO VOC, PM₁₀, and SO_x due to the combustion of gas, and some emit VOCs from fluid treatment chambers.

The heater treaters are not equipped with exhaust emissions control devices.

VII. General Calculations

The proposed changes do not constitute 'modifications' in accordance with District Rule 2201, Section 3.25. This will be discussed in detail in Section VIII, *District Rules 2201*, of this evaluation. Therefore, the requirements of Rule 2201 do not apply and detailed emissions calculations are not required or necessary. However, PE2 will be calculated for inclusion in the PAS emissions profile.

Post-Project Emission Factors (EF2)

For this unit, post-project emission factors are listed in the table below.

S-1547-994

Pollutant	Post-Project Emission Factors (EF2)			Source
NO _x	36 lb-NO _x /MMscf	0.036 lb-NO _x /MMBtu	30 ppmvd NO _x (@ 3%O ₂)	Current PTO
SO _x	2.0 lb-SO _x /MMscf	0.002 lb-SO _x /MMBtu		"
PM10	1.2 lb-PM10/MMscf	0.012 lb-PM10/MMBtu		"
CO	37 lb-CO/MMscf	0.037 lb-CO/MMBtu	50 ppmvd CO (@ 3%O ₂)	"
VOC	4.0 lb-VOC/MMscf	0.004 lb-VOC/MMBtu	13 ppmvd VOC (@ 3% O ₂)	"

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO _x	0.036	4.2	24	see below
SO _x	0.00200	4.2	24	0.2
PM ₁₀	0.0120	4.2	24	1.2
CO	0.037	4.2	24	see below
VOC	0.0040	4.2	24	0.4

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO _x	0.036	4.2	8,760	1,325
SO _x	0.00200	4.2	8,760	74
PM ₁₀	0.0120	4.2	8,760	442
CO	0.037	4.2	8,760	1,361
VOC	0.0040	4.2	8,760	147

Startup and shutdown (PTO S-1547-994-14-condition #16):

NO_x: 20.2 lb/day

CO: 4.2 lb/day

S-1547-999

Pollutant	Post-Project Emission Factors (EF2)			Source
	EF2 (lb/MMscf)	EF2 (lb/MMBtu)	Concentration (ppmvd @ 3% O ₂)	
NO _x	36 lb-NO _x /MMscf	0.036 lb-NO _x /MMBtu	30 ppmvd NO _x (@ 3%O ₂)	Current PTO
SO _x	2.0 lb-SO _x /MMscf	0.002 lb-SO _x /MMBtu		"
PM ₁₀	14 lb-PM ₁₀ /MMscf	0.014 lb-PM ₁₀ /MMBtu		"
CO	37 lb-CO/MMscf	0.037 lb-CO/MMBtu	50 ppmvd CO (@ 3%O ₂)	"
VOC	3.0 lb-VOC/MMscf	0.003 lb-VOC/MMBtu	13 ppmvd VOC (@ 3% O ₂)	"

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO _x	0.036	5	24	see below
SO _x	0.00200	5	24	0.2
PM ₁₀	0.0140	5	24	1.7
CO	0.037	5	24	see below
VOC	0.0030	5	24	0.4

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO _x	0.036	5	8,760	1,577
SO _x	0.00200	5	8,760	88
PM ₁₀	0.0140	5	8,760	613
CO	0.037	5	8,760	1,621
VOC	0.0030	5	8,760	131

Startup and shutdown (PTO S-1547-999-16 condition #14):
 NO_x: 33.6 lb/day
 CO: 4.4 lb/day

S-1547-1006

Pollutant	Post-Project Emission Factors (EF2)			Source
NO _x	36 lb-NO _x /MMscf	0.036 lb-NO _x /MMBtu	30 ppmvd NO _x (@ 3%O ₂)	PTO
SO _x	2.0 lb-SO _x /MMscf	0.002 lb-SO _x /MMBtu		"
PM ₁₀	8.0 lb-PM ₁₀ /MMscf	0.008 lb-PM ₁₀ /MMBtu		"
CO	37 lb-CO/MMscf	0.037 lb-CO/MMBtu	50 ppmvd CO (@ 3%O ₂)	"
VOC*	5.5 lb-VOC/MMscf	0.0055 lb-VOC/MMBtu	13 ppmvd VOC (@ 3% O ₂)	AP-42, Table 1.4-1 & -2 (7/98)

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO _x	0.036	5	24	see below
SO _x	0.00200	5	24	0.2
PM ₁₀	0.0080	5	24	1.0
CO	0.037	5	24	see below
VOC	0.0055	5	24	0.7

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO _x	0.036	5	8,760	1,577
SO _x	0.00200	5	8,760	88
PM ₁₀	0.0080	5	8,760	350
CO	0.037	5	8,760	1,621
VOC	0.0055	5	8,760	241

* not previously included on PTO
startup and shutdown (PTO S-1547-1006-11 condition #14):
NO_x: 24.0 lb/day
CO: 20.2 lb/day

The emissions profiles are included in **Attachment II**.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

District Rule 2201 defines a modification as follows:

3.25 Modification:

3.25.1 An action including at least one of the following items:

3.25.1.1 Any change in hours of operation, production rate, or method of operation of an existing emissions unit that would necessitate a change in permit conditions.

No change in hours of operation, production rate, or method of operation of these existing heater treaters is proposed.

3.25.1.2 Any structural change or addition to an existing emissions unit that would necessitate a change in, permit conditions. Routine replacement shall not be considered a structural change.

No structural change or addition is proposed to any existing emissions units.

3.25.1.3 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.

No increase in emissions is proposed.

3.25.1.4 Addition of any new emissions unit that is subject to District permitting requirements.

No new emissions units are proposed with this project.

3.25.1.5 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.

Aera is not seeking to obtain an exemption from any applicable requirement.

3.25.2 A reconstructed Stationary Source shall be treated as a new Stationary Source and not as a modification.

Per Section 3.33 of Rule 2201, a reconstructed source is determined when the cost of replacing emissions units exceeds 50% of the cost of an entirely new stationary source.

No construction will result from this project.

As discussed above, this project is not subject to Rule 2201, as the proposed changes are not considered modifications pursuant to the rule.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. This facility is subject to this Rule, and has received their Title V Operating Permit. Section 3.29 defines a significant permit modification as a “permit amendment that does not qualify as a minor permit modification or administrative amendment.”

Section 3.20.2 states that a minor permit modifications “Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions”. Requiring record-keeping of only startup and shutdowns that exceed the time limits of Rule 4307 (and not all startup and shutdowns as previously required) is a relaxation of recordkeeping requirements. As a result, the proposed project constitutes a Significant Modification to the Title V Permit pursuant to Section 3.29.

The Title V Compliance Certification form is included in **Attachment III**.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). Visible emissions are not expected from these units and the facility-wide permit already contains a condition enforcing the requirements of this Rule. Therefore continued compliance is expected.

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants that could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

As demonstrated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not required.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

The heater treaters have historically shown compliance with this rule. No modifications affecting particulate matter concentration are proposed. Continued compliance with this rule is expected.

Rule 4301 Fuel Burning Equipment

Rule 4301 limits air contaminant emissions from fuel burning equipment as defined in the rule. Section 3.1 defines fuel burning equipment as "any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer."

No emission changes are proposed or expected as a result of this project. Therefore, continued compliance with this rule is expected.

Rule 4307 Boilers, Steam Generators, And Process Heaters – 2.0 MMBtu/hr to 5.0 MMBtu/hr

This rule limits the NO_x and CO emissions from boiler, steam generator, or process heater with a total heat input of 2.0 MMBtu/hr ≤ 5.0 MMBtu/hr.

Section 5.0 Emissions Limits

The heater treaters are in compliance with the Section 5.0 emissions limits requirements of the rule.

Section 5.3 Particulate Matter Control Requirements

These requirements are not applicable until 2015

Section 5.5 Monitoring Provisions – Monthly Monitoring

Section 6.0 Administrative Requirements – Startup/Shutdown

The units are in compliance with the monitoring and startup and shutdown provisions as stated in the following conditions:

Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] N

Permittee shall maintain records of duration of each startup and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records available for District inspection upon request. [District Rule 4307]

The permittee shall monitor, at least once per month, the units' operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] N

The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] N

If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] N

If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] N

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 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] N

Compliance with this rule is expected.

Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.

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

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

With:

n = moles SO₂

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

P (Standard Pressure) = 14.7 psi

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

The units included in this project are limited to SOx emissions of 0.002 lb/MMBtu or less. As shown below, this correlates to a stack concentration well under the 2000 ppmv allowed by this rule:

$$\frac{0.002 \text{ lb} - \text{SOx}}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 1 \frac{\text{part}}{\text{million}}$$

$$\text{Sulfur Concentration} = 1 \frac{\text{part}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}$$

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

Greenhouse Gas Significance Determination

The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue Authorities to Construct subject to the permit conditions on the attached drafts (**Attachment IV**).

X. Billing Information

Annual Permit Fees		
Permit Number	Fee Schedule	Fee Description MMBtu/hr
S-1547-994-15	3020-02-F	4.6 MMBtu/hr
S-1547-999-17	3020-02-G	5.0 MMBtu/hr
S-1547-1006-14	3020-02-G	5.0 MMBtu/hr

Attachments

- I: Current PTOs '-994-14, '-999-16, and '-1006-11
- II: Emissions Profiles
- III: Compliance Certification Form
- IV: Draft ATCs

ATTACHMENT I
Current PTOs '994-14, '999-16, and '1006-11

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1547-994-14

EXPIRATION DATE: 05/31/2007

SECTION: NE14 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

4.2 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND VAPOR CONTROL LISTED ON S-1547-865 (NORTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] 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. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. 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
6. 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 has been demonstrated for 8 consecutive weeks for a fuel source, then the 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
7. 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 EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate 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
8. 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 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. 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), 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
11. 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), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). 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 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
13. Heater treater shall be fired exclusively on natural gas or LPG. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Emission rates, except during startup, shutdown and refractory curing shall not exceed any of the following: PM10: 0.012 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.004 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
16. Emission rates shall not exceed any of the following: PM10: 1.2 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.4 lb/day, NOx (as NO2): 20.2 lb/day or 2649 lb/year, or CO: 4.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit
18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit
20. The permittee shall monitor, at least once per month, the units's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit
21. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
23. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] 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 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit
25. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Heater treater and appurtenances shall be maintained gas-tight (as defined in Rule 4623 (9/19/91)) except during periods of unit maintenance or cleaning, vapor control system maintenance, and power curtailment. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit
27. 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
28. 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
29. 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
30. 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
31. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

32. 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
33. 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
34. 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
35. Formerly S-1511-627.

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1547-999-16

EXPIRATION DATE: 05/31/2007

SECTION: NE14 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

5 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND SERVED BY VAPOR CONTROL LISTED ON S-1547-865 (NORTH MIDWAY UNIT B-101C - ALBERTA SHALE LEASE)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] 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. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
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 has been demonstrated for 8 consecutive weeks for a fuel source, then the 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
6. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory and EPA Method 19 to calculate 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
7. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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 4468, D 4084, D3246 or grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

9. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Unit shall be equipped with a non-resettable fuel flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Unit shall be operated in accordance with the manufacturer's recommendations. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Emission rates, except during startup, shutdown and refractory curing shall not exceed any of the following: PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
14. Emission rates shall not exceed any of the following: PM10: 1.7 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.4 lb/day, NOx (as NO2): 33.6 lb/day or 1577 lb/year, or CO: 4.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Duration of start-up and shutdown shall not exceed one hours each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit
16. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit
18. The permittee shall monitor, at least once per month, the units's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit
19. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit
20. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
21. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

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

22. All 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 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit
23. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit
25. 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, 9.4.2] Federally Enforceable Through Title V Permit
26. Gas-tight (as defined in District Rule 4623, 5.3.3) shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this limit shall be considered a leak. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. 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, 9.4.2] Federally Enforceable Through Title V Permit
28. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
29. 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, 9.4.2] Federally Enforceable Through Title V Permit
30. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. 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, 9.4.2] Federally Enforceable Through Title V Permit

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

32. 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, 9.4.2] Federally Enforceable Through Title V Permit
33. 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
34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4307] Federally Enforceable Through Title V Permit
35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081 and 4307] Federally Enforceable Through Title V Permit
36. 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 Rule 4307] Federally Enforceable Through Title V Permit
37. 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
38. Formerly S-1511-632.

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1547-1006-11

EXPIRATION DATE: 05/31/2007

SECTION: NE35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:

5 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND A FLUID TREATMENT CHAMBER SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '-853, '-882, '-883, '-884, '-1005 TO '-1011, AND '-1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] 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. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. 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
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 has been demonstrated for 8 consecutive weeks for a fuel source, then the 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 EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate 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
These terms and conditions are part of the Facility-wide Permit to Operate.

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 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans 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 conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the fluid treatment chamber shall be connected to a vapor recovery system consisting of a closed vent system that collects all VOCs from the fluid treatment chamber and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Emission rates, except during startup shutdown and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
13. Emission rates during startup shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
14. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit
16. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit
18. The permittee shall monitor, at least once per month, the units's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit
19. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit
20. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

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

21. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
22. 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 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit
23. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit
24. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit
25. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit
26. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit
27. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair or maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
29. 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 upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. 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

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

32. 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
33. 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
34. 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 99% efficient as measured by EPA Method 18 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 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown 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 shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. 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, 9.4.2] Federally Enforceable Through Title V Permit
38. Formerly S-1511-641.

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

ATTACHMENT II
Emissions Profile

Vertical text on the right edge of the page, likely a page number or reference code.

Permit #: S-1547-994-15 Last Updated
Facility: AERA ENERGY LLC 04/06/2010 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	1325.0	74.0	442.0	1361.0	147.0
Daily Emis. Limit (lb/Day)	20.2	0.2	1.2	4.2	0.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1547-999-17	Last Updated
Facility: AERA ENERGY LLC	04/06/2010 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	1577.0	88.0	613.0	1621.0	131.0
Daily Emis. Limit (lb/Day)	33.6	0.2	1.7	4.4	0.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1547-1006-14	Last Updated
Facility: AERA ENERGY LLC	04/06/2010 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	1577.0	88.0	350.0	1621.0	241.0
Daily Emis. Limit (lb/Day)	24.0	0.2	0.1	20.2	0.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

ATTACHMENT III
Compliance Certification Form

11/19/2014 10:11:11 AM

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

RECEIVED
AUG 10 2006
SJVAPCD
Southern Region

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE AMENDMENT
 MINOR PERMIT MODIFICATION

COMPANY NAME: Aera Energy LLC	FACILITY ID: S - 1547
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Aera Energy LLC	
3. Agent to the Owner: N/A	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- Based on information and belief formed after reasonable inquiry, the emissions units identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the emissions units identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Jeff Dittman
Signature of Responsible Official

8/4/07
Date

Jeff Dittman
Name of Responsible Official (please print)

Manager of Operations
Title of Responsible Official (please print)

Modify S-1547-994-14, -999-16, and -1006-11

Mailing Address: Central Regional Office * 1990 Gettysburg Avenue * Fresno, CA 93726-0244 * (559) 230-5900 * FAX (559) 230-6061

ATTACHMENT IV
Draft ATCs

2025 RELEASE UNDER E.O. 14176

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1547-994-15

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE14 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 4.2 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND VAPOR CONTROL LISTED ON S-1547-865 (NORTH MIDWAY): REVISE RECORDKEEPING REQUIREMENT FROM ALL STARTUPS AND SHUTDOWNS TO ONLY STARTUPS AND SHUTDOWNS THAT EXCEED ONE HOUR IN DURATION

CONDITIONS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] 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. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. {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

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DRAFT

DAVID WARNER, Director of Permit Services

S-1547-994-15 : Apr 6 2010 11:10AM - EDGEHLR : Joint Inspection NOT Required

6. {557} 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 has been demonstrated for 8 consecutive weeks for a fuel source, then the 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
7. 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 EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate 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
8. 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 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. {563} 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), 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
11. 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), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
12. {1695} 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
13. Heater treater shall be fired exclusively on natural gas or LPG. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Emission rates, except during startup, shutdown and refractory curing shall not exceed any of the following: PM10: 0.012 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.004 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
16. Emission rates shall not exceed any of the following: PM10: 1.2 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.4 lb/day, NOx (as NO2): 20.2 lb/day or 2649 lb/year, or CO: 4.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit
20. The permittee shall monitor, at least once per month, the units's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit
21. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit
22. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
23. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] 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 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit
25. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Heater treater and appurtenances shall be maintained gas-tight (as defined in Rule 4623 (9/19/91)) except during periods of unit maintenance or cleaning, vapor control system maintenance, and power curtailment. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit
27. 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
28. 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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CONDITIONS CONTINUE ON NEXT PAGE

29. 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
30. 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
31. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. 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
35. Formerly S-1511-627.

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1547-999-17

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE14 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 5 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND SERVED BY VAPOR CONTROL LISTED ON S-1547-865 (NORTH MIDWAY UNIT B-101C - ALBERTA SHALE LEASE): REVISE RECORDKEEPING REQUIREMENT FROM ALL STARTUPS AND SHUTDOWNS TO ONLY STARTUPS AND SHUTDOWNS THAT EXCEED ONE HOUR IN DURATION

CONDITIONS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] 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. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5600 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services

S-1547-999-17 : Apr 6 2010 11:10AM - EDGEHLR : Joint Inspection NOT Required

5. {557} 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 has been demonstrated for 8 consecutive weeks for a fuel source, then the 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
6. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory and EPA Method 19 to calculate 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
7. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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 4468, D 4084, D3246 or grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Unit shall be equipped with a non-resettable fuel flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Unit shall be operated in accordance with the manufacturer's recommendations. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Emission rates, except during startup, shutdown and refractory curing shall not exceed any of the following: PM₁₀: 0.014 lb/MMBtu, SO_x (as SO₂): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NO_x (as NO₂): 0.036 lb/MMBtu or 30 ppmv @ 3% O₂, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O₂. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO₂; sulfur - 200 pounds of SO₂ per hour, or 2000 ppmv as SO₂, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO₂ - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
14. Emission rates shall not exceed any of the following: PM₁₀: 1.7 lb/day, SO_x (as SO₂): 0.2 lb/day, VOC: 0.4 lb/day, NO_x (as NO₂): 33.6 lb/day or 1577 lb/year, or CO: 4.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Duration of start-up and shutdown shall not exceed one hours each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit
16. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit
18. The permittee shall monitor, at least once per month, the units's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit
20. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
21. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
22. 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 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit
23. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit
25. {969} 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, 9.4.2] Federally Enforceable Through Title V Permit
26. Gas-tight (as defined in District Rule 4623, 5.3.3) shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this limit shall be considered a leak. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. {970} 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, 9.4.2] Federally Enforceable Through Title V Permit
28. {971} An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
29. {972} 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, 9.4.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

30. {973} Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. {974} 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, 9.4.2] Federally Enforceable Through Title V Permit
32. {975} 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, 9.4.2] Federally Enforceable Through Title V Permit
33. {981} 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
34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4307] Federally Enforceable Through Title V Permit
35. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SO_x (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H₂S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081 and 4307] Federally Enforceable Through Title V Permit
36. 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 Rule 4307] Federally Enforceable Through Title V Permit
37. {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
38. Formerly S-1511-632.

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1547-1006-14

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:

MODIFICATION OF 5 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND A FLUID TREATMENT CHAMBER SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '-853, '-882, '-883, '-884, '-1005 TO '-1011, AND '-1025) - SOUTH MIDWAY: REVISE RECORDKEEPING REQUIREMENT FROM ALL STARTUPS AND SHUTDOWNS TO ONLY STARTUPS AND SHUTDOWNS THAT EXCEED ONE HOUR IN DURATION, ADD VOC DEL

CONDITIONS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] 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. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

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DAVID WARNER, Director of Permit Services

S-1547-1006-14 : Apr 8 2010 11:10AM - EDG:HLR : Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. {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
7. {557} 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 has been demonstrated for 8 consecutive weeks for a fuel source, then the 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 EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate 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
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 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans 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 conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the fluid treatment chamber shall be connected to a vapor recovery system consisting of a closed vent system that collects all VOCs from the fluid treatment chamber and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Emission rates, except during startup shutdown and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2, and VOC: 0.0055 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
13. Emission rates during startup shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
14. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit
16. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

17. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit
18. The permittee shall monitor, at least once per month, the units's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit
19. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit
20. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
21. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
22. 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 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit
23. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit
24. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit
25. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit
26. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit
27. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair or maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

29. {2604} 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 upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. {2620} 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
32. {2621} 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
33. 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
34. 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 99% efficient as measured by EPA Method 18 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 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown 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 shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. 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, 9.4.2] Federally Enforceable Through Title V Permit
38. Formerly S-1511-641.

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