



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



NOV 06 2013

Mr. John Ludwick
Aera Energy, LLC
PO Box 11164
bakersfield, CA 93389

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1547
Project # S-1134096

Dear Mr. Ludwick:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. Aera Energy proposes to remove obsolete federal "PSD" conditions that stated SOx scrubber requirements

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. 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:SD/st

Enclosures

cc: Mike Tollstrup, CARB (w/enclosure) via email
cc: Gerardo C. Rios, EPA (w/enclosure) via email

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Removal of "PSD" Conditions from Gas-Fired Steam Generators

Facility Name: Aera Energy, LLC Date: October 21, 2013
Mailing Address: P.O. Box 11164 Engineer: Steve Davidson
Bakersfield, CA 93389 Lead Engineer: Allan Phillips *ASUPRA DE*
Contact Person: John Ludwick
Telephone: 661-665-4472 Wkd: 661-699-2827 OCT 29 2013
Fax: 661-665-7437
E-Mail: JJLudwick@aeraenergy.com
Application #(s): S-1547-709-20, '-725-22, '-742-18, '-743-18, '-744-19, '-745-21, '-746-20,
8'-747-19, '-748-19, and '-749-23
Project #: S-1134096
Deemed Complete: October 18, 2013

I. Proposal

Aera Energy, LLC (hereafter referred to as Aera) has submitted Authority to Construct (ATC) applications to remove obsolete Federal Prevention of Significant Deterioration (PSD) conditions that included SOx scrubber requirements and general notification and operational requirements. The scrubbers were originally required as a control for the steam generators when the steam generators were fired on crude oil. The District authorized the removal of the scrubbers when the steam generators were converted to gas firing. The general notification and operational requirements are redundant to current District rule requirements. Prior to November 26, 2012, when the District's PSD Rule 2410 incorporated Federal PSD rule requirements and the District became the administrator of the PSD program, the District had no authority to remove the Federal PSD conditions. Aera is proposing to remove the obsolete PSD conditions from the Permits (see removed conditions in Attachment B)

Aera received their Title V Permit on January 31, 2003. This modification can be classified as a Title V significant modification pursuant to Rule 2520, Section 3.29, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, 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 permit.

II. Applicable Rules

Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)

III. Project Location

These steam generators are located in the Belridge Oilfield, within Aera's Heavy Oil Western Stationary Source. The Section, Township, and Range of each unit are listed in the table below.

Steam Generator Location			
Permit	Section	Township	Range
S-1547-709-20	NE/4 03	29S	21E
S-1547-725-22	SW/4 01	29S	21E
S-1547-742-18	NE/4 03	29S	21E
S-1547-743-18	NE/4 03	29S	21E
S-1547-744-19	NE/4 03	29S	21E
S-1547-745-21	SE/4 03	29S	21E
S-1547-746-20	SE/4 02	29S	21E
S-1547-747-19	SE/4 02	29S	21E
S-1547-748-19	SE/4 02	29S	21E
S-1547-749-23	SE/4 02	29S	21E

The equipment will not be located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Aera Energy, LLC operates permitted equipment in the Belridge Oilfield for the production of crude oil and natural gas. In thermally enhanced oil recovery (TEOR), natural gas is combusted in steam generators to produce steam for injection into heavy crude oil bearing strata via injection wells to reduce the viscosity of the crude oil, thereby facilitating thermally enhanced oil production. Gas produced along with crude oil is captured and processed for use as fuel.

V. Equipment Listing

Pre-Project Equipment Description:

PTO

S-1547-709-19: 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (3-2, DIS# 5401-72) (BELRIDGE 3-2)

Minor Mod

S-1547-725-21: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (#1-1B) (BELRIDGE)

Minor Mod

S-1547-742-17: 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, A FLUE GAS RECIRCULATION SYSTEM AND NON-

CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#3-2H)
(BELRIDGE)

Minor Mod

S-1547-743-17: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR EQUIPPED WITH A COEN QLN-ULN LOW-NOX BURNER, JOHN ZINK/TODD COOL FUEL SYSTEM, AND FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#3-2I) (BELRIDGE)

Minor Mod

S-1547-744-18: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS- FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3G) (BELRIDGE)

Minor Mod

S-1547-745-20: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN 3.2 LOW-NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3A) (BELRIDGE)

Minor Mod

S-1547-746-19: 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH COEN QLN-ULN BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3B) (BELRIDGE)

Minor Mod

S-1547-747-18: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3C) (BELRIDGE)

Minor Mod

S-1547-748-18: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN ULTRA LOW-NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#2-3D) (BELRIDGE)

Minor Mod

S-1547-749-22: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH COEN QLN-ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3E) (BELRIDGE)

Proposed Modification:

Aera has requested to remove obsolete Federal "PSD" conditions that stated SOx scrubber requirements.

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- S-1547-709-20: 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (3-2, DIS# 5401-72) (BELRIDGE 3-2)
- S-1547-725-22: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (#1-1B) (BELRIDGE)
- S-1547-742-18: 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, A FLUE GAS RECIRCULATION SYSTEM AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#3-2H) (BELRIDGE)
- S-1547-743-18: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR EQUIPPED WITH A COEN QLN-ULN LOW-NOX BURNER, JOHN ZINK/TODD COOL FUEL SYSTEM, AND FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#3-2I) (BELRIDGE)
- S-1547-744-19: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS- FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3G) (BELRIDGE)
- S-1547-745-21: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN 3.2 LOW-NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3A) (BELRIDGE)
- S-1547-746-20: 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH COEN QLN-ULN BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3B) (BELRIDGE)
- S-1547-747-19: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3C) (BELRIDGE)
- S-1547-748-19: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN ULTRA LOW-NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#2-3D) (BELRIDGE)
- S-1547-749-23: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH COEN QLN-ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3E) (BELRIDGE)

Post Project Equipment Description:

- S-1547-709-20: 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (3-2, DIS# 5401-72) (BELRIDGE 3-2)
- S-1547-725-22: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (#1-1B) (BELRIDGE)
- S-1547-742-18: 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, A FLUE GAS RECIRCULATION SYSTEM AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#3-2H) (BELRIDGE)
- S-1547-743-18: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR EQUIPPED WITH A COEN QLN-ULN LOW-NOX BURNER, JOHN ZINK/TODD COOL FUEL SYSTEM, AND FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#3-2I) (BELRIDGE)
- S-1547-744-19: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS- FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3G) (BELRIDGE)
- S-1547-745-21: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN 3.2 LOW-NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3A) (BELRIDGE)
- S-1547-746-20: 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH COEN QLN-ULN BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3B) (BELRIDGE)
- S-1547-747-19: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3C) (BELRIDGE)
- S-1547-748-19: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN ULTRA LOW-NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#2-3D) (BELRIDGE)
- S-1547-749-23: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH COEN QLN-ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3E) (BELRIDGE)

VI. Emission Control Technology Evaluation

No changes to authorized emission control technologies is proposed.

VII. General Calculations

A. Assumptions

This proposal is not an NSR Modification and does not have an increase in emissions. Therefore, NSR calculations are not required.

Additionally, the facility concedes that is an existing major source for PSD. Therefore, calculations to determine if the facility is an existing PSD source are not required.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

This project only proposes to remove obsolete PSD conditions and doesn't request any modifications that would subject it to NSR. Therefore, Rule 2201 does not apply and no further discussion is required.

Rule 2410 Prevention of Significant Deterioration

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO₂ (as a primary pollutant)
- SO₂ (as a primary pollutant)
- CO
- PM
- PM₁₀
- Greenhouse gases (GHG): CO₂, N₂O, CH₄, HFCs, PFCs, and SF₆

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not. The facility concedes that it is an existing PSD major Source.

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

I. Project Location Relative to Class 1 Area

The facility is an existing major source for PSD. Because the project is not located within 10 km of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Significance of Project Emission Increase Determination

a. Potential to Emit of attainment/unclassified pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds

This project has a total potential to emit from all new and modified emission units greater than PSD significant emission increase thresholds, further analysis is required to determine if the project has an emission increase greater than the PSD significant emission increase thresholds, see step below.

b. Emission Increase for Each Attainment/Unclassified Pollutant with a Significant Emission Increase vs PSD Significant Emission Increase Thresholds

In this step, the emission increase for each attainment/unclassified pollutant is compared to the PSD significant emission increase thresholds, and if emission increase for each attainment pollutant is below this threshold, no further analysis is needed.

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

For existing emissions units, the increase in emissions is calculated as follows:

$$\text{Emission Increase} = \text{PAE} - \text{BAE} - \text{UBC}$$

Where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions
UBC = Unused baseline capacity

Since this project does not result in an increase in design capacity or potential to emit, and it does not impact the ability of the emission unit to operate at a higher utilization rate, the UBC is the portion of PAE that the emission units could have accommodated during the baseline period.

The proposed change to the permit conditions does not represent a physical or operational change as the SOx scrubber was previously removed under a previous permitting action.

There is not an increase project emission in this project; therefore, the project does not exceed any of the PSD significant emission increase thresholds. The project does not result in a PSD major modification due to a significant emission increase and no further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modifications relax reporting and recordkeeping requirements in the permit;

therefore, this is a Significant Modification to the Title V Permit pursuant to Section 3.29 of this rule.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue Authorities to Construct S-1547-709-20, '-725-22, '-742-18, '-743-18, '-744-19, '-745-21, '-746-20, 8'-747-19, '-748-19, and '-749-23 subject to the permit conditions on the attached draft Authorities to Construct in **Appendix D**.

X. Billing Information

Annual Permit Fees			
	Fee Schedule	Fee Description	Annual Fee
All Permits	3020-02-H	62.5 MMBtu/hr	\$1,030.00

Appendices

- A: Current Base Permits
- B: Conditions to be Removed
- C: Emissions Profiles
- D: Compliance Certification Form
- E: Draft ATCs

Appendix A

Current Base Permits

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1547-709-19

EXPIRATION DATE: 05/31/2016

SECTION: NE03 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (3-2, DIS# 5401-72) (BELRIDGE 3-2)

PERMIT UNIT REQUIREMENTS

1. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]
2. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
3. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
4. A source test to demonstrate compliance with the NO_x and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. 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
6. 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
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. 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 Rules 2520, 9.3.2, and 4320] Federally Enforceable Through Title V Permit
9. 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 Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

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

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
11. 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 Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1; and 4320, 6.2.1] Federally Enforceable Through Title V Permit
12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
14. 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) 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
15. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
16. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
18. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424] Federally Enforceable Through Title V Permit
20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4301, 4305, 5.1, 4306, 5.1, 4405 and Kern County Rule 425 and PSD SJ 78-11] Federally Enforceable Through Title V Permit
21. 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
22. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

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

23. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
25. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2, 4306, 5.5.2, and 4320, 5.8.2] Federally Enforceable Through Title V Permit
29. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NO_x and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070]
30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

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

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3, 4306, 6.3, and 4320, 6.3] Federally Enforceable Through Title V Permit
32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1, 4306, 5.5.1, and 4320] Federally Enforceable Through Title V Permit
33. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
34. 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 Rule 1081, 4305, 6.2, 4306, 6.2, and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit
36. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
37. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1, 4306, 6.1, and 4320] Federally Enforceable Through Title V Permit
38. Formerly S-1511-7
39. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
40. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit
41. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
42. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
43. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] 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.

44. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
45. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
46. Facility shall conduct annual performance tests for SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
47. Performance tests for SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
48. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
49. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

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



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-725-13

ISSUANCE DATE: 05/28/2009

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: SW01 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (#1-1B) (BELRIDGE); REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 9 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE (RENEWED TWO TIMES - 5/20/13 JAG)

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]
4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

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

COPY

DAVID WARNER, Director of Permit Services
S-1547-725-13 : Oct 22 2013 7:58AM - DAVIDSD09 : Joint Inspection NOT Required

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]
6. 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
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. 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, 9.3.2] 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, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
11. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and 4801.3.1] Federally Enforceable Through Title V Permit
12. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.005 lb/MMBtu, SO_x (as SO₂): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NO_x (as NO₂): 0.011 lb/MMBtu or 9 ppmv @ 3% O₂, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O₂. [District NSR Rule, 2520, 4201, 4301, 4305, 4306, 4320, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
16. 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
17. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SO_x (as SO₂): 2.9 lb/day, VOC: 4.4 lb/day, NO_x (as NO₂): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit
18. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NO_x emission shall not exceed 15 ppmvd NO_x @ 3% O₂ or 0.018 lb-NO_x/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

19. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4320] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

27. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
28. Source testing to measure NO_x and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. 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 Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit
32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
34. Formerly S-1511-50
35. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
36. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
37. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
38. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
39. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
40. Facility shall conduct annual performance tests for SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

41. Performance tests for SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
42. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
43. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-742-11

ISSUANCE DATE: 05/28/2009

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: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER, A FLUE GAS RECIRCULATION SYSTEM AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#3-2H) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 9 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE (RENEWED TWO TIMES - 5/20/13 JAG)

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]
4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

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

COPY

DAVID WARNER, Director of Permit Services

S-1547-742-11; Oct 22 2013 7:58AM - DAVIDSOS : Joint Inspection NOT Required

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]
6. 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
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. 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
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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit
11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
12. Unit shall be equipped with the following: natural gas volume flowmeter and a TEOR non-condensable gas volume flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
15. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit
16. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total TEOR gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.011 lb/MMBtu or 9 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
18. 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

CONDITIONS CONTINUE ON NEXT PAGE

19. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. 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 Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
33. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
34. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
35. Steam generator shall be operated at no greater than 97.78 percent of maximum design capacity heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
36. Formerly S-1511-81
37. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
38. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
39. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
40. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
41. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
42. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
43. SO_x (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

44. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
45. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
46. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-743-11

ISSUANCE DATE: 05/28/2009

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: NE03 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR EQUIPPED WITH A COEN QLN-ULN LOW-NOX BURNER, JOHN ZINK/TODD COOL FUEL SYSTEM, AND FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#3-2I) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 9 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE (RENEWED TWO TIMES - 5/20/13 JAG)

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]
4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

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

COPY

DAVID WARNER, Director of Permit Services
S-1547-743-11; Oct 22 2013 7:58AM - DAVIDSD9 : Joint Inspection NOT Required

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]
6. 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
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. 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
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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit
11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
12. Unit shall be equipped with the following: natural gas volume flowmeter and a TEOR non-condensable gas volume flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
15. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit
16. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total TEOR gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.011 lb/MMBtu or 9 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
18. 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

CONDITIONS CONTINUE ON NEXT PAGE

19. Emission rates shall not exceed any of the following: PM₁₀: 240.0 lb/day, VOC: 4.4 lb/day, NO_x (as NO₂): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. If the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. 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, D4084 or double GC for H₂S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
33. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
34. Steam generator shall be operated at no greater than 97.78 percent of maximum design capacity heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
35. Formerly S-1511-82
36. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
37. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
38. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
39. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
40. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
41. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
42. SO_x (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
43. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
44. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

45. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
46. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-744-12

ISSUANCE DATE: 05/28/2009

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: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS- FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3G) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT-GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 9 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE (RENEWED TWO TIMES - 5/20/13 JAG)

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]
4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

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

COPY

DAVID WARNER, Director of Permit Services
S-1547-744-12 : Oct 22 2013 7:58AM - DAVIDSOB : Joint Inspection NOT Required

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]
6. 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
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. 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
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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit
11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhw/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
17. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit
18. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.011 lb/MMBtu or 9 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. 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
21. Emission rates shall not exceed any of the following: PM₁₀: 240.0 lb/day, VOC: 4.4 lb/day, NO_x (as NO₂): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
22. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. If the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
31. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. 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 Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
38. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
39. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
40. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
41. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
42. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

43. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
44. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
45. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
46. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
47. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
48. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
49. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
50. Formerly S-1511-83



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-745-14

ISSUANCE DATE: 05/28/2009

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: SE02 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN 3.2 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3A) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 9 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE (RENEWED TWO TIMES - 5/20/13 JAG)

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]
4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

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 Sadreddin, Executive Director / APCO

COPY

DAVID WARNER, Director of Permit Services

S-1547-745-14 : Oct 22 2013 7:58AM - DAVIDSOS : Joint Inspection NOT Required

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]
6. 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
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. 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
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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit
11. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhw/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
16. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit
17. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.011 lb/MMBtu or 9 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

19. 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
20. Emission rates shall not exceed any of the following: PM₁₀: 240.0 lb/day, VOC: 4.4 lb/day, NO_x (as NO₂): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. If NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

28. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
29. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. 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 Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit
33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
35. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
36. Formerly S-1511-84
37. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
38. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
39. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
40. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
41. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
42. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

43. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
44. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
45. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
46. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
47. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
48. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-746-13

ISSUANCE DATE: 05/28/2009

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: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF: 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH COEN QLN-ULN BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3B) (BELRIDGE); REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 9 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE (RENEWED TWO TIMES - 5/20/13 JAG)

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]
4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

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

COPY

DAVID WARNER, Director of Permit Services

S-1547-746-13 : Oct 22 2013 7:56AM - DAVIDSOS : Joint Inspection NOT Required

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]
6. 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
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. 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
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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit
11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhw/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
17. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit
18. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.011 lb/MMBtu or 9 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. 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
21. Emission rates shall not exceed any of the following: PM₁₀: 240.0 lb/day, VOC: 4.4 lb/day, NO_x (as NO₂): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
22. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. The NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. 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 Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
38. Formerly S-1511-85
39. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
40. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
41. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
42. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

43. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
44. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
45. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
46. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
47. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
48. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
49. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
50. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-747-12

ISSUANCE DATE: 05/28/2009

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: SE02 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3C) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 9 PPM @ 3% O₂ FOR RULE 4320 COMPLIANCE (RENEWED TWO TIMES - 5/20/13 JAG)

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]
4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

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-1547-747-12 : Oct 22 2013 7:58AM - DAVIDS08 : Joint Inspection NOT Required

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]
6. 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
7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. 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, 9.3.2] 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, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1] Federally Enforceable Through Title V Permit
11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
17. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SO_x (as SO₂): 0.002 lb/MMBtu. [District NSR Rule, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit
18. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District NSR Rule, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NO_x (as NO₂): 0.011 lb/MMBtu or 9 ppmv @ 3% O₂, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O₂. [District NSR Rule, 2520, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. 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
21. Emission rates shall not exceed any of the following: PM₁₀: 240.0 lb/day, VOC: 4.4 lb/day, NO_x (as NO₂): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District NSR Rule, 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
22. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4320] Federally Enforceable Through Title V Permit
23. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NO_x emission shall not exceed 15 ppmvd NO_x @ 3% O₂ or 0.018 lb-NO_x/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. If the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit
30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
32. Source testing to measure NO_x and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
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 Rule 1081, 4305, and 4306] 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 Rules 4305 and 4306] Federally Enforceable Through Title V Permit
37. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
38. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
39. Formerly S-1511-86
40. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
41. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

42. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
43. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
44. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
45. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
46. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
47. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
48. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
49. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
50. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
51. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-749-12

ISSUANCE DATE: 05/28/2009

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: SE02 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3E) (BELRIDGE) : REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 9 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE (RENEWED TWO TIMES - 5/20/13 JAG)

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]
4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

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7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
8. 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
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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit
11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
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14. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
17. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit
18. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.011 lb/MMBtu or 9 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. 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
21. Emission rates shall not exceed any of the following: PM₁₀: 240.0 lb/day, VOC: 4.4 lb/day, NO_x (as NO₂): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day. [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
22. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]
23. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. If the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. 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 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320]
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
38. Formerly S-1511-88
39. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
40. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
41. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

42. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
43. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
44. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
45. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
46. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
47. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
48. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
49. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
50. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

Appendix B

Conditions to be Removed

Permit S-1547-709-20:

41. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Y
42. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Y
43. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Y
44. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Y
45. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Y
46. Facility shall conduct annual performance tests for SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Y
47. Performance tests for SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Y
48. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Y
49. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Y

Permit S-1547-725-22:

29. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Y
30. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Y
31. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Y
32. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Y
33. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Y
34. Facility shall conduct annual performance tests for SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Y
35. Performance tests for SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Y
36. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Y
37. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Y

Permit S-1547-742-18:

39. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Y

41. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Y
42. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Y
43. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Y
44. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Y

Permit S-1547-743-18:

37. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Y
38. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Y
39. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Y
40. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Y
41. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Y
42. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Y
43. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Y

44. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Y
45. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Y
46. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Y
47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Y

Permit S-1547-744-19:

37. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Y
38. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Y
39. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Y
40. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Y
41. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Y
42. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Y

43. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Y
44. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Y
45. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Y
46. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Y
47. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Y
48. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Y

Permit S-1547-745-19:

36. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Y
37. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Y
38. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Y
39. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Y
40. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Y

41. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Y
42. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Y
43. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Y
44. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Y
45. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Y
46. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Y
47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Y

Permit S-1547-746-20:

37. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Y
38. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Y
39. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Y

40. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Y
41. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Y
42. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Y
43. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Y
44. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Y
45. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Y
46. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Y
47. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Y
48. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Y

Permit S-1547-747-19:

37. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Y
38. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Y

39. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Y
40. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Y
41. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Y
42. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Y
43. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Y
44. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Y
45. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Y
46. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Y
47. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Y
48. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Y

Permit S-1547-748-19:

37. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Y

38. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Y
39. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Y
40. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Y
41. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Y
42. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Y
43. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Y
44. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Y
45. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Y
46. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Y
47. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Y
48. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Y

Permit S-1547-749-23:

36. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Y
37. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Y
38. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Y
39. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Y
40. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Y
41. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Y
42. SOX (as SO₂) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Y
43. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Y
44. Facility shall conduct annual performance tests for NO_x and SO_x and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Y
45. Performance tests for NO_x and SO_x (as SO₂) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Y
46. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Y

47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Y

Appendix C
Emissions Profiles

1

Permit #: S-1547-709-20	Last Updated
Facility: AERA ENERGY LLC	10/18/2013 DAVIDSOS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	9636.0		2677.0	16060.0	1606.0
Daily Emis. Limit (lb/Day)	27.0	2.9	7.5	45.0	4.5
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-1547-725-22 Last Updated
Facility: AERA ENERGY LLC 10/18/2013 DAVIDSOS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	7495.0	1071.0	2677.0	16060.0	1606.0
Daily Emis. Limit (lb/Day)	27.0	2.9	7.3	45.0	4.4
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-1547-742-18	Last Updated
Facility: AERA ENERGY LLC	10/18/2013 DAVIDSOS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	7495.0		2677.0	16060.0	1606.0
Daily Emis. Limit (lb/Day)	52.8	21.0	7.5	45.0	4.5
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-1547-743-18	Last Updated
Facility: AERA ENERGY LLC	10/18/2013 DAVIDSOS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	7495.0		2677.0	16060.0	1606.0
Daily Emis. Limit (lb/Day)	52.8	21.0	7.5	45.0	4.5
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-1547-744-19	Last Updated
Facility: AERA ENERGY LLC	10/18/2013 DAVIDSOS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	7495.0		2676.0	16060.0	1606.0
Daily Emis. Limit (lb/Day)	52.8	21.0	7.5	45.0	4.5
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-1547-745-21	Last Updated
Facility: AERA ENERGY LLC	10/18/2013 DAVIDSOS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	7495.0		2677.0	16060.0	1606.0
Daily Emis. Limit (lb/Day)	52.8	21.0	7.5	45.0	4.5
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-1547-746-20 Last Updated
Facility: AERA ENERGY LLC 10/18/2013 DAVIDSOS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	7495.0		2677.0	16060.0	1606.0
Daily Emis. Limit (lb/Day)	52.8	21.0	7.5	45.0	4.5
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-1547-747-19 Last Updated
Facility: AERA ENERGY LLC 10/18/2013 DAVIDSOS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	7495.0		2677.0	16060.0	1606.0
Daily Emis. Limit (lb/Day)	52.8	21.0	7.5	45.0	4.5
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-1547-748-19	Last Updated
Facility: AERA ENERGY LLC	10/18/2013 DAVIDSOS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	7495.0		2677.0	16060.0	1606.0
Daily Emis. Limit (lb/Day)	52.8	21.0	7.5	45.0	4.5
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-1547-749-23	Last Updated
Facility: AERA ENERGY LLC	10/18/2013 DAVIDSOS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	7495.0		2676.0	16060.0	1606.0
Daily Emis. Limit (lb/Day)	52.8	21.0	7.3	45.0	4.5
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:					

Appendix D
Compliance Certification

San Joaquin Valley
Unified Air Pollution Control District

RECEIVED
OCT 22 2013

TITLE V COMPLIANCE CERTIFICATION FORM

SJVAPCD
Southern Region

PSD removal from Steam Generators

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

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 each circle for confirmation):

- Based on information and belief formed after reasonable inquiry, the emission units identified in this application will continue to comply with the applicable federal requirement(s) which the emission units are in compliance.
- Based on information and belief formed after reasonable inquiry, the emission 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:



Signature of Responsible Official

10-22-13

Date

Rick Roeder

Name of Responsible Official (please print)

Process Supervisor

Title of Responsible Official (please print)

Appendix E

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT
ISSUANCE DATE: DRAFT

PERMIT NO: S-1547-709-20

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: NE03 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (3-2, DIS# 5401-72) (BELRIDGE 3-2); REMOVE OUTDATED PSD CONDITIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]
4. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305, 4306, and 4320] 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

DAVID WARNER, Director of Permit Services

6-1547-709-20 : Oct 29 2013 9:44AM - DAVIDSOS : Joint Inspection NOT Required

6. A source test to demonstrate compliance with the NO_x and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. 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
8. 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
9. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit 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 Rules 2520, 9.3.2, and 4320] Federally Enforceable Through Title V Permit
11. 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 Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
12. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H₂S: ASTM D6228 or grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
13. 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 Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1; and 4320, 6.2.1] Federally Enforceable Through Title V Permit
14. {564} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
15. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. {1682} 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) 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
17. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhw/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
20. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424] Federally Enforceable Through Title V Permit
22. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4301, 4305, 5.1, 4306, 5.1, 4405 and Kern County Rule 425 and PSD SJ 78-11] Federally Enforceable Through Title V Permit
23. 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
24. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit
25. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
27. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

29. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2, 4306, 5.5.2, and 4320, 5.8.2] Federally Enforceable Through Title V Permit
31. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NO_x and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070]
32. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3, 4306, 6.3, and 4320, 6.3] 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 Rules 4305, 5.5.1, 4306, 5.5.1, and 4320] Federally Enforceable Through Title V Permit
35. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
36. 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 Rule 1081, 4305, 6.2, 4306, 6.2, and 4320] Federally Enforceable Through Title V Permit
37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit
38. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
39. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1, 4306, 6.1, and 4320] Federally Enforceable Through Title V Permit
40. Formerly S-1511-7

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CONDITIONS CONTINUE ON NEXT PAGE

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

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1547-725-22

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: SW01 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR C.E. NATCO NATURAL GAS STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (#1-1B) (BELRIDGE): REMOVE OUTDATED PSD CONDITIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Emissions 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
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit 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, 9.3.2] 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

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DAVID WARNER, Director of Permit Services
S-1547-725-22 : Oct 29 2013 9:44AM - DAVID808 : Joint Inspection NOT Required

5. 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, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and 4801.3.1] Federally Enforceable Through Title V Permit
8. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhw/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
11. The total gas fired in this unit, on a monthly volume basis, shall be less than 50% PUC quality natural gas (as defined in Rule 4320), by volume. [District Rule 4320, 5.2] Federally Enforceable Through Title V Permit
12. The permittee shall maintain monthly records of the volume of PUC quality natural gas (as defined in Rule 4320) and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320, 5.2] Federally Enforceable Through Title V Permit
13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.011 lb/MMBtu or 9 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule, 2520, 4201, 4301, 4305, 4306, 4320, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
14. 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
15. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit
16. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4320] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
22. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
24. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

27. 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 Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit
28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
29. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
30. Formerly S-1511-50

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1547-742-18

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: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, A FLUE GAS RECIRCULATION SYSTEM AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#3-2H) (BELRIDGE): REMOVE OUTDATED PSD CONDITIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. {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

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DAVID WARNER, Director of Permit Services
8-1547-742-18 : Oct 29 2013 9:44AM - DAVIDSOS : 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. 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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit
8. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. Unit shall be equipped with the following: natural gas volume flowmeter and a TEOR non-condensable gas volume flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
12. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
13. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit
14. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320] Federally Enforceable Through Title V Permit
15. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total TEOR gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.011 lb/MMBtu or 9 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
17. 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
18. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
26. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

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CONDITIONS CONTINUE ON NEXT PAGE

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
29. The 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 Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
31. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320] Federally Enforceable Through Title V Permit
32. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
34. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
35. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
36. Formerly S-1511-81

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1547-743-18

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: NE03 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR EQUIPPED WITH A COEN QLN-ULN LOW-NOX BURNER, JOHN ZINK/TODD COOL FUEL SYSTEM, AND FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#3-21) (BELRIDGE):REMOVE OUTDATED PSD CONDITIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. {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

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DAVID WARNER, Director of Permit Services

8-1547-743-18 : Oct 28 2013 9:44AM - DAVIDSOB : 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. 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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 4301, and 4801] Federally Enforceable Through Title V Permit
8. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensable gas volume flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
14. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320] Federally Enforceable Through Title V Permit
15. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H₂S: ASTM D6228 or grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
16. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit
17. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320] Federally Enforceable Through Title V Permit
18. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM₁₀: 0.005 lb/MMBtu or SO_x (as SO₂): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total TEOR gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.011 lb/MMBtu or 9 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
21. 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
22. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
23. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. 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 Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit
33. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
36. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
38. Formerly S-1511-82

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1547-744-19

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: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS- FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3G) (BELRIDGE): REMOVE OUTDATED PSD CONDITIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. {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

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DAVID WARNER, Director of Permit Services
S-1547-744-19 : Oct 28 2013 9:44AM - DAVIDSOS : 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. 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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit
8. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhw/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
14. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
15. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320] Federally Enforceable Through Title V Permit
16. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H₂S: ASTM D6228 or grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
17. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit
18. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320] Federally Enforceable Through Title V Permit
19. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM₁₀: 0.005 lb/MMBtu or SO_x (as SO₂): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rules 424] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
21. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NO_x (as NO₂): 0.011 lb/MMBtu or 9 ppmv @ 3% O₂, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O₂. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
22. 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
23. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NO_x (as NO₂): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
24. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
32. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
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 Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] 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 Rules 4305 and 4306] Federally Enforceable Through Title V Permit
37. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
38. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
39. Formerly S-1511-83

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1547-745-21

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: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN 3.2 LOW-NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3A) (BELRIDGE): REMOVE OUTDATED PSD CONDITIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. {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

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DAVID WARNER, Director of Permit Services
8-1547-745-21: Oct 29 2013 9:44AM - DAVIDSOS : 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. 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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit
8. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhw/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320] Federally Enforceable Through Title V Permit
14. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H₂S: ASTM D6228 or grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
15. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
16. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320] Federally Enforceable Through Title V Permit
17. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM₁₀: 0.005 lb/MMBtu or SO_x (as SO₂): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424] Federally Enforceable Through Title V Permit
18. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM₁₀ emissions shall not exceed the lb/hr limit calculated as follows: $PM_{10} = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NO_x (as NO₂): 0.014 lb/MMBtu or 12 ppmv @ 3% O₂, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O₂. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. 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
21. Emission rates shall not exceed any of the following: PM₁₀: 240.0 lb/day, VOC: 4.4 lb/day, NO_x (as NO₂): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
22. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

28. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit
29. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
33. 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 Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit
34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
36. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
37. Formerly S-1511-84

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT
ISSUANCE DATE: DRAFT

PERMIT NO: S-1547-746-20

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: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH COEN QLN-ULN BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3B) (BELRIDGE): REMOVE OUTDATED PSD CONDITIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. {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

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DAVID WARNER, Director of Permit Services
8-1547-746-20 : Oct 28 2013 9:44AM - DAVIDSOS : Joint Inspection NOT Required

5. {S57} 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. 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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit
8. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhw/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
14. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320] Federally Enforceable Through Title V Permit
15. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H₂S: ASTM D6228 or grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
16. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
17. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320] Federally Enforceable Through Title V Permit
18. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM₁₀: 0.005 lb/MMBtu or SO_x (as SO₂): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424] Federally Enforceable Through Title V Permit
19. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM₁₀ emissions shall not exceed the lb/hr limit calculated as follows: $PM_{10} = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NO_x (as NO₂): 0.011 lb/MMBtu or 9 ppmv @ 3% O₂, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O₂. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
21. 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
22. Emission rates shall not exceed any of the following: PM₁₀: 240.0 lb/day, VOC: 4.4 lb/day, NO_x (as NO₂): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
23. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

29. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. 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 Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1547-747-19

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: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3C) (BELRIDGE): REMOVE OUTDATED PSD CONDITIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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-1547-747-19 : Oct 29 2013 9:44AM - DAVIDSOS : Joint Inspection NOT Required

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, 9.3.2] Federally Enforceable Through Title V Permit
6. 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, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1, 4320] Federally Enforceable Through Title V Permit
8. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
14. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
15. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320] Federally Enforceable Through Title V Permit
16. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H₂S: ASTM D6228 or grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
17. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320] Federally Enforceable Through Title V Permit
19. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM₁₀: 0.005 lb/MMBtu or SO_x (as SO₂): 0.002 lb/MMBtu. [District NSR Rule, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District NSR Rule, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
21. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.011 lb/MMBtu or 9 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule, 2520, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
22. 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
23. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day [District NSR Rule, 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
24. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4320] Federally Enforceable Through Title V Permit
25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit
31. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
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 Rule 1081, 4305, and 4306] 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 Rules 4305 and 4306] Federally Enforceable Through Title V Permit
37. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
38. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
39. Formerly S-1511-86

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1547-748-19

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: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN ULTRA LOW-NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#2-3D) (BELRIDGE): REMOVE OUTDATED PSD CONDITIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. {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

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DAVID WARNER, Director of Permit Services
S-1547-748-19 : Oct 29 2013 8:44AM - DAVIDSOB : 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. 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; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and 4801.3.1] Federally Enforceable Through Title V Permit
8. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhw/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
14. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
15. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320] Federally Enforceable Through Title V Permit
16. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H₂S: ASTM D6228 or grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
17. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320] Federally Enforceable Through Title V Permit
19. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM₁₀: 0.005 lb/MMBtu or SO_x (as SO₂): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
21. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.011 lb/MMBtu or 9 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
22. 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
23. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day. [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
24. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4320] Federally Enforceable Through Title V Permit
25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
32. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
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 Rule 1081, and 4305, 6.2] 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 Rules 4305 and 4306] Federally Enforceable Through Title V Permit
37. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
38. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
39. Formerly S-1511-87

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1547-749-23

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: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH COEN QLN-ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3E) (BELRIDGE): REMOVE OUTDATED PSD CONDITIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. {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

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DAVID WARNER, Director of Permit Services
S-1547-749-23 : Oct 29 2013 8:45AM - DAVIDSOS : 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. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 4301, and Rule 4801] Federally Enforceable Through Title V Permit
8. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhw/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
14. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
15. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320] Federally Enforceable Through Title V Permit
16. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
17. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424] Federally Enforceable Through Title V Permit
19. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})\} / (24 \text{ hr/day})$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NO_x (as NO₂): 0.011 lb/MMBtu or 9 ppmv @ 3% O₂, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O₂. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
21. 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
22. Emission rates shall not exceed any of the following: PM₁₀: 240.0 lb/day, VOC: 4.4 lb/day, NO_x (as NO₂): 52.8 lb/day or 5889 lb/year, or CO: 44.0 lb/day. [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit
23. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

29. For each steam generator site downstream of H₂S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. 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 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H₂S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit
38. Formerly S-1511-88

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