San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAY 03 2011

Mr. Tim Parcel
Aera Energy LLC
PO Box 11164
Bakersfield, CA. 93389

Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # C-1121
Project # C-1110471

Dear Mr. Parcel:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Aera Energy LLC in Coalinga, CA. Aera is proposing to replace the existing burners with ultra low NOx burners or tune the existing burners of 4 permit units at their Fresno County Heavy Oil stationary source to meet the 9 ppm NOx compliance option of District Rule 4320, Advanced Emission Reductions Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the Authorities to Construct will be issued to the facility with Certificates of Conformity. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

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

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/bw

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAY 0 3 2011

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

Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # C-1121
Project # C-1110471

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Aera Energy LLC in Coalinga, CA, which has been issued a Title V permit. Aera Energy LLC is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. Aera is proposing to replace the existing burners with ultra low NOx burners or tune the existing burners of 4 permit units at their Fresno County Heavy Oil stationary source to meet the 9 ppm NOx compliance option of District Rule 4320, Advanced Emission Reductions Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr.

Enclosed is the engineering evaluation of this application, along with the current Title V permit, and proposed Authorities to Construct # C-1121-17-25, '-18-25, '-19-25, and '-41-25 with Certificates of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

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

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW:SD/bw

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San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAY 0 3 2011

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

Re: **Notice of Preliminary Decision - ATC / Certificate of Conformity**
Facility # C-1121
Project # C-1110471

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Aera Energy LLC in Coalinga, CA. Aera is proposing to replace the existing burners with ultra low NOx burners or tune the existing burners of 4 permit units at their Fresno County Heavy Oil stationary source to meet the 9 ppm NOx compliance option of District Rule 4320, Advanced Emission Reductions Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr.

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

Thank you for your cooperation in this matter. If you have any questions, 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/bw

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Fresno Bee

**NOTICE OF PRELIMINARY DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND
THE PROPOSED MINOR MODIFICATION OF FEDERALLY
MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed issuance of Authority To Construct to Aera Energy LLC for its heavy oil facility in Coalinga, California. Aera is proposing to replace the existing burners with ultra low NOx burners or tune the existing burners of 4 permit units at their Fresno County Heavy Oil stationary source to meet the 9 ppm NOx compliance option of District Rule 4320, Advanced Emission Reductions Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr.

The analysis of the regulatory basis for these proposed actions, Project #C-1110471, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.**

San Joaquin Valley Air Pollution Control District
Authority to Construct

Retrofit of Steam Generators for Rule 4320 Compliance

Facility Name:	Aera Energy, LLC	Date:	March 22, 2011
Mailing Address:	P.O. Box 11164	Engineer:	Steve Davidson
	Bakersfield, CA 93389-1164	Lead Engineer:	Rich Karrs
Contact Person:	Tim Parcel		RWK
Telephone:	559-935-7418		4-13-11
Fax:	559-351-3218		
Application #(s):	C-1121-17-25, '-18-25, '-19-25 and '-41-25		
Project #:	C-1110471		
Deemed Complete:	March 16, 2011		

I. PROPOSAL

Aera Energy, LLC (Aera) requests Authority to Construct (ATC) permit(s) for the modification of 4 gas-fired steam generators at their Fresno County Heavy Oil Stationary Source to comply with the applicable NOx provisions of District Rule 4320, Advanced Emission Reductions Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr. To comply with the NOx requirements of Rule 4320, Aera is proposing to replace the existing burner of each of the steam generators with a 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 to meet a NOx emission limit of 9 ppmv @ 3% O2 (Rule 4320 C2b). There will be no increase in potential emissions of any pollutant as a result of this project.

Rule 4320 also contains provisions for SOx and PM10 emissions. Aera addressed the SOx and PM10 emissions requirements in project 1101107. Therefore, they will not be addressed by this project.

The above modifications are proposed solely to comply with District Rule 4320 requirements for NOx emissions. Since there is a change to the method of operation of the steam generators, these changes are modifications pursuant to District Rule 2201, *New and Modified Stationary Source Review Rule*.

Aera requests approval of a 60-day "shakedown" period for units to be retrofitted, after installation of the new low-NOx combustion equipment or the combustion modifications authorized by these requested ATCs. Aera requests that the units be allowed to operate at the current NOx emission limit of 15 ppmv @3%O2 until the shakedown period is completed. The shakedown period will not exceed 60 days nor extend beyond the applicable Rule 4320 compliance deadline. The ATCs will include provisions for a 60-day "shakedown" period (see also Compliance Section).

Aera received their Title V Permit on December 31, 2001. This modification can be classified as a Title V Minor Modification pursuant to Rule 2520, Section 3.20, 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 Operating Permit to include the requirements of the ATC (s) issued with this project.

II. APPLICABLE RULES

District Rule 2201	New and Modified Stationary Source Review Rule (12/18/2008)
District Rule 2520	Federally Mandated Operating Permits (6/21/01)
District Rule 4001	New Source Performance Standards (4/14/99)
District Rule 4101	Visible Emissions (2/17/05)
District Rule 4102	Nuisance (12/17/92)
District Rule 4201	Particulate Matter Concentration (12/17/92)
District Rule 4301	Fuel Burning Equipment (12/17/92)
District Rule 4305	Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)
District Rule 4306	Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/2008)
District Rule 4320	Advanced Emission Reductions Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
District Rule 4351	Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)
District Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. PROJECT LOCATION

The equipment is located in the Coalinga Oil Field (Section: 29, Township: 19S, Range 15E) within Aera's Fresno County Heavy Oil stationary source. The equipment is not 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 Coalinga Oil Field utilized for the thermally enhanced 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 viscosity of the crude oil, thereby facilitating thermally enhanced oil production.

The maximum operating schedule used for Potential to Emit calculations is 24 hr/day and 365 days/year.

V. EQUIPMENT LISTING

Pre-Project Equipment Description:

ATC C-1121-17-24: MODIFICATION OF SG S-9, 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH COEN QLN ULN BURNER AND FLUE GAS RECIRCULATION SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-18, '-19 AND '-41: INSTALL SULFATREAT VESSELS DOWNSTREAM OF LO-COST SCAVENGING SYSTEM FOR H2S REMOVAL AND LIMIT EXHAUST SOX EMISSIONS TO 9 PPMV @3% O2 FOR RULE 4320 COMPLIANCE

ATC C-1121-18-24: MODIFICATION OF SG S-10, 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX BURNER, AND A FLUE GAS RECIRCULATION (FGR) SYSTEM SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-17, '-19 AND '-41: INSTALL SULFATREAT VESSELS DOWNSTREAM OF LO-COST SCAVENGING SYSTEM FOR H2S REMOVAL AND LIMIT EXHAUST SOX EMISSIONS TO 9 PPMV @3% O2 FOR RULE 4320 COMPLIANCE

ATC C-1121-19-24: MODIFICATION OF SG S-11, 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX BURNER AND A FLUE GAS RECIRCULATION (FGR) SYSTEM SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-17, '-18 AND '-41: INSTALL SULFATREAT VESSELS DOWNSTREAM OF LO-COST SCAVENGING SYSTEM FOR H2S REMOVAL AND LIMIT EXHAUST SOX EMISSIONS TO 9 PPMV @ 3% O2 FOR RULE 4320 COMPLIANCE

ATC C-1121-41-24: MODIFICATION OF 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (S-12) WITH COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-17, '-18 AND '-19: INSTALL SULFATREAT VESSELS DOWNSTREAM OF LO-COST SCAVENGING SYSTEM FOR H2S REMOVAL AND LIMIT EXHAUST SOX EMISSIONS TO 9 PPMV @ 3% O2 FOR RULE 4320 COMPLIANCE

Proposed Modification:

For all units in this project:

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 EMISSION LIMIT TO 9 PPMV @ 3% O2 FOR RULE 4320 COMPLIANCE

Post Project Equipment Description:

For all the units in this project, Aera is proposing to replace the 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 emission limit to 9 ppmv @ 3% O2 for Rule 4320 compliance.

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

The combustion equipment in this project is capable of generating NOx, CO, VOC, PM10 and SOx emissions due to the combustion of natural gas. The NOx emissions will be lowered by either:

1) replacing existing burners 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
2) tuning existing burner to meet a NOx emission limit of 9 ppmv @ 3% O2 (Rule 4320 C2b).

All the units are equipped with flue gas re-circulation (FGR). Aera plans to keep the FGR and use them only as needed to meet the 9 ppmv NOx limit.

Low-NO_X burners reduce NO_X formation by producing lower flame temperatures (and longer flames) than conventional burners. Conventional burners thoroughly mix all the fuel and air in a single stage just prior to combustion, whereas low-NO_X burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen to produce thermal NO_X. In the secondary and tertiary stages, the combustion zone is maintained in a fuel-lean environment. The excess air in these stages helps to reduce the flame temperature so that the reaction between the excess oxygen with nitrogen is minimized.

The use of FGR can reduce nitrogen oxides (NO_X) emissions by 60% to 70%. In an FGR system, a portion of the flue gas is re-circulated back to the inlet air. As flue gas is composed mainly of nitrogen and the products of combustion, it is much lower in oxygen than the inlet air and contains virtually no combustible hydrocarbons to burn. Thus, flue gas is practically inert. The addition of an inert mass of gas to the combustion reaction serves to absorb heat

without producing heat, thereby lowering the flame temperature. Since thermal NO_X is formed by high flame temperatures, the lower flame temperatures produced by FGR serve to reduce thermal NO_X.

VII. GENERAL CALCULATIONS

A. Assumptions

- There will be no change in current permitted emissions rates, daily and annual potential to emit for CO, VOC, SOx or PM10
- There is a decrease in the NOx emission rate to 9 ppmv @ 3% O2 (0.008 lb-NOx/MMBtu)
- The daily potential to emit (PE) for NOx will not decrease as the daily PE includes startup, shutdown and refractory curing emissions
- The annual potential to emit for NOx will decrease in proportion to the reduction in emission rate as the annual potential to emit reflects compliance with Rule 4320.
- The units are limited to less than maximum capacity with a daily fuel use limit of 1500 MMBtu/day (MMscf/day). These units will maintain their daily fuel use limit.
- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)

B. Emission Factors

Pre-Project Emission Factors (EF1)

Pollutant	Pre-Project Steady-State Emission Factor for NOx (EF1)			Source
NO_X	18.2 lb-NO_X/MMscf	0.0182 lb-NO_X/MMBtu	15 ppmvd NO_X (@ 3%O2)	Current Permit

Post-Project Emission Factors (EF2)

Pollutant	Post-Project Steady-State Emission Factors (EF1)			Source
NO_X	11 lb-NO_X/MMscf	0.011 lb-NO_X/MMBtu	9 ppmvd NO_X (@ 3%O2)	Rule 4320

C. Calculations

Since there is no change in emission rates and potential to emit for CO, VOC, SOx and PM10, emissions for these pollutants are not calculated in this project.

1. Pre-Project Potential to Emit (PE1)

All the units in this project except Unit '-17 have pre-project potential to emit of 51.5 lb-NOx/day, based on 30 ppmvd NOx @ 3% O2 (from previous PTOs), to include higher startup and shutdown emissions.

Unit C-1121-17 has pre-project potential to emit of 54.0 lb-NOx/day, based on 30 ppmvd NOx @ 3% O2 (from previous PTOs), to include higher startup and shutdown emissions.

The annual pre-project potential to emit for all the units in this project except Unit '-17 is 9,499 lb-NOx/yr (based on 15 ppmvd @ 3% O2 – current PTO).

The annual pre-project potential to emit for Unit C-1121-17 is 9,855 lb-NOx/yr (based on 15 ppmvd @ 3% O2 – current PTO).

The daily and annual PE1 are summarized in a table below:

NOx Daily and Annual PE1			
Permit Unit	**EF1** ppmv (lb/MMBtu)	**Daily PE1**	**Annual PE1**
-17-16, 62.5 MMBtu/hr	15 (0.018)	54.0	9,855
-18-16, 62.5 MMBtu/hr	15 (0.018)	51.5	9,395
-19-16, 62.5 MMBtu/hr	15 (0.018)	51.5	9,395
-41-16, 62.5 MMBtu/hr	15 (0.018)	51.5	9,395

2. Post-Project Potential to Emit (PE2)

The applicant has proposed that the DEL for NOx will remain the same after the modifications authorized as a result of this project. This is to allow the maximum flexibility in including NO_x and CO start-up and shutdown emissions and daily steady-state emissions.

The NOx annual PE will decrease consistent with the lowered emission rate of 9 ppmv @ 3% O_2 (0.018 lb/MMBtu).

Daily PE2:

PE2 = 51.5 lb-NOx/day (except '-17 which has PE2 of 54.0 lb-NOx/day

The emission limits of 51.5 lb-NOx/day and 54.0 lb-NOx/day (for Unit '-17) were retained from the current PTOs based on the previous NOx emission factor of 0.036 lb-NOx/MMBtu (30 ppmvd @ 3%O_2) to allow higher start-up and shutdown emissions and daily steady-state emissions.

Annual PE2:

All Units:

PE2 = 0.011 lb-NO_X/MMBtu x 1500 MMBtu/hr x 365 day/yr
PE2 = **6,023** lb-NO_X/yr

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

SSPE1 calculations are necessary to aid the following determinations:

- If the facility is becoming a new Major Source,
- An offset threshold will be surpassed, or
- A Stationary Source Increase in Permitted Emissions (SSIPE) public notice is triggered

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for all pollutants. There is no increase in potential emissions for any of the units, for any pollutant in this project; therefore, SSPE1 calculations are not necessary.

4. Post-Project Stationary Source Potential to Emit (SSPE2)

SSPE2 calculations are necessary to aid the following determinations:

- If the facility is becoming a new Major Source,
- An offset threshold will be surpassed, or
- An SSIPE public notice is triggered

Pursuant to Section 4.10 of District Rule 2201, the Post-Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for all pollutants. There is no increase in potential emissions for any of the units, for any pollutant in this project. The potential to emit NOx will decrease in accordance with District Rule 4320. Therefore, SSPE2 calculations are not necessary.

5. Major Source Determination

Pursuant to Section 3.24 of District Rule 2201, a major source is a stationary source a Post-Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the Major Source threshold values (excluding ERCs banked onsite that have not been used onsite).

This source is an existing Major Source for all pollutants and will remain so. No change in Major Source status is proposed or expected as a result of this project.

6. Baseline Emissions (BE)

The BE calculation (in lbs/year) is performed pollutant-by-pollutant for each unit within the project, to calculate the QNEC and if applicable, to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold.

Pursuant to Section 3.22 of District Rule 2201, this project is exempt from offset requirements; therefore, BE calculations are not required.

7. SB 288 Major Modification

This facility is an existing major source for all air contaminants.

District Rule 2201 references the definition of major modification provided in 40 CFR 51.165 (v)(A) in effect on December 19, 2002, where major modification means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.

Significant is defined under Part 51.165(x) as a net emissions increase in the potential of a source to emit any affected pollutant equal to or exceeding any applicable thresholds. For existing major sources in the San Joaquin Valley Air Basin, which is non-attainment for ozone and PM_{10}, a major modification occurs if the Net Emissions Increases (NEI) is equal to or greater than one or more of the following threshold values when calculated on actual to PE basis:

VOC – 50,000 lb/year;
NO_X – 50,000 lb/year;
PM10 – 30,000 lb/year; and
SO_X – 80,000 lb/year.

Because of the large number of affected units in this project and the fact that steam generators typically have actual emissions below their permitted emission levels, the applicant stipulates that the major modification threshold values are exceeded for VOC, NO_X, PM10, and SO_X.

Therefore, this project is a SB 288 Major Modification and public notice is required.

8. Federal Major Modification

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA. SB 288 Major Modifications are not Federal Major Modifications if they meet the criteria of the "Less-Than-Significant Emissions Increase" exclusion.

A Less-Than-Significant Emissions Increase exclusion is for an emissions increase for the project, or a Net Emissions Increase for the project (as defined in 40 CFR 51.165 (a)(2)(ii)(B) through (D), and (F)), that is not significant for a given regulated NSR pollutant, and therefore is not a Federal Major Modification for that pollutant.

- To determine the post-project projected actual emissions from existing units, the provisions of 40 CFR 51.165 (a)(1)(xxviii) shall be used.
- To determine the pre-project baseline actual emissions, the provisions of 40 CFR 51.165 (a)(1)(xxxv)(A) through (D) shall be used.
- If the project is determined not to be a Federal Major Modification pursuant to the provisions of 40 CFR 51.165 (a)(2)(ii)(B), but there is a reasonable possibility that the project may result in a significant emissions increase, the owner or operator shall comply with all of the provisions of 40 CFR 51.165 (a)(6) and (a)(7).
- Emissions increases calculated pursuant to this section are significant if they exceed the significance thresholds specified in the table below.

Pollutant	Threshold (lb/year)
VOC	0
NOx	0
PM10	30,000
SOx	80,000

The proposed modification 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. Therefore the unused baseline capacity emissions (portion of PAE that unit could have accommodated) can also be excluded from the project Net Emissions Increase (NEI) calculation as follows:

NEI = PAE – BAE – unused baseline capacity emissions

The District has determined that the unit could have emitted PAE during the baseline period (when it emitted BAE) and therefore the unused baseline emissions are equal to PAE – BAE and NEI = 0. Therefore the project is not a Federal Major Modification.

9. Quarterly Net Emissions Change (QNEC)

The QNEC will be calculated for each pollutant, for each unit, as the difference between the quarterly PE2 and the quarterly PE1. The QNEC for each pollutant is shown in the table(s) below:

QNEC for NOx			
Permit	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
C-1121-17	6,023	9,855	-958
C-1121-18	6,023	9,395	-843
C-1121-19	6,023	9,395	-843
C-1121-41	6,023	9,395	-843

VIII. COMPLIANCE

District Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in a Major Modification.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

d. Major Modification

As discussed in Section VII.C.7 above, this project does constitute a SB 288 Major Modification; therefore, BACT is triggered for all emissions units associated with this stationary source project.

2. BACT Exemption

The proposed modifications subject to the requirements of Rule 2201 are solely for compliance with Rule 4320, and are exempt from BACT, per Rule 2201 4.2.3, if the following criteria are satisfied.

For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the

APCO, shall be exempt from Best Available Control Technology for all air pollutants, provided all of the following conditions are met:

There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself.

- There is no increase in the physical or operational design of the existing facility.

There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit.

- There is no increase in the permitted rating or permitted operating schedule of the permitted units.

There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and

- There is no increase in emissions from the stationary source.

The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NOx, or 25 tons per year of VOC, or 15 tons per year of SOx, or 15 tons per year of PM-10, or 50 tons per year of CO.

- There is no increase in permitted emissions for this project.

The project shall not constitute a Federal Major Modification.

- As shown in Section VII.C.8, above, this project does not constitute a Federal Major Modification.

The facility is existing and the proposed modification will be performed solely for the purpose of compliance with the requirements of District Rule 4320. Therefore, the modifications proposed in this project are exempt from Best Available Control Technology for all air pollutants.

B. Offsets

1. Offset Applicability

The proposed modifications are solely for compliance with Rule 4320, and are exempt from offsets if the following criteria are satisfied. Rule 2201, Section 4.6.8 provides the following exemption from offsets.

Emission offsets shall not be required for the following:

4.6.8 For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the APCO, shall be exempt from offset requirements for all air pollutants provided all of the following conditions are met:

4.6.8.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;
4.6.8.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;
4.6.8.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and
4.6.8.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO_x, or 25 tons per year of VOC, or 15 tons per year of SO_x, or 15 tons per year of PM-10, or 50 tons per year of CO.

Since the above-listed criteria are met, (as discussed in Section VIII A.2) offsets are not required for any pollutant.

2. Quantity of Offsets Required

As seen above, the project meets the exemption requirements of section 4.6.8 of District Rule 2201; therefore, offset calculations are not necessary and offsets are not required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:
a. Any new Major Source, which is a new facility that is also a Major Source,
b. SB 288 and Federal Major Modifications,
c. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
d. Any project which results in the offset thresholds being surpassed, and/or
e. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Source

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

b. SB 288 Major Modification and Federal Major Modification

As demonstrated in VII.C.7, this project constitutes a SB 288 Major Modification; therefore, public noticing for SB 288 Major Modification purposes is required.

As demonstrated in VII.C.8, this project does not constitute a Federal Major Modification; therefore, public noticing for Federal Major Modification purposes is not required.

c. PE > 100 lb/day

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant; therefore public noticing for PE > 100 lb/day purposes is not required.

d. Offset Threshold

Public notification is required if the Pre-Project Stationary Source Potential to Emit (SSPE1) is increased from a level below the offset threshold to a level exceeding the emissions offset threshold, for any pollutant.

There is no increase in permitted emissions as a result of this project. Therefore, the SSPE is not increasing with this project and an offset threshold cannot be surpassed as a result of this project. A public notice will not be required for offset threshold purposes.

e. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant.

There is no increase in permitted emissions as a result of this project. As a result, SSPE is not increasing with this project. Therefore, the SSIPE is zero for all pollutants and public notice will not be required for SSIPE purposes.

2. Public Notice Action

As discussed above, the project is a major modification and public notice will be required.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and

3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

The DELs for the project units are a combination of permitted emission factors and equipment rating or fuel use (BTU or scf per day). The applicant requests the inclusion of the NOx DEL be specified in terms of lb/day. Therefore, the following conditions will be listed on the ATCs:

For all units:

- Emission rates shall not exceed any of the following limits: NOx (as NO2): 9 ppmv @ 3% O2 or 0.011 lb/MMBtu (27.0 lb/day), CO: 43 ppmv @ 3%O2 or 0.032 lb/MMBtu (48.0 lb/day),. PM10: 0.0076 lb/MMBtu (11.4 lb-PM10/day), or VOC: 0.008 lb/MMBtu (12.0 lb/day). [District Rule 2201, 4201, 4305, 4306 and 4320] Y

- Emission rates shall not exceed any of the following units: NOx (as NO2): XXX lb/day. [District Rules 2201, 4305, 4306 and 4320]

- Fuel consumption from the steam generator shall not exceed 1,500,000 scf/day of natural gas. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

The units in this project are subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3, and District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr*. Source testing requirements will be discussed in the compliance review section of this evaluation.

2. Monitoring

As required by District Rules 4305, 4306 and 4320, the units are subject to monitoring requirements. Monitoring requirements, in accordance with District Rules will be discussed in the compliance review section of this evaluation.

3. Recordkeeping

As required by District Rules 4305, 4306 and 4320, the units are subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rules will be discussed in the compliance review of this evaluation.

The following permit condition will be listed on permit as follows:

- {2983} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

Section 4.14 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard.

Since this project does not increase criteria pollutant emissions, and since District modeling is performed on maximum potential to emit (rather than potential actual use), the proposed modification to reduce NO_x emissions can not cause a violation of an air quality standards. This project is not expected to cause or make worse a violation of an air quality standard.

District Rule 2520 Federally Mandated Operating Permits

Aera Energy, LLC's Fresno Heavy Oil Western stationary source has a Title V permit. The changes authorized by these ATCs constitute a minor modification of their Title V permit. The facility has requested that this ATC be issued with a Certificate of Conformity (COC). Therefore, prior to issuance, this ATC will undergo a 45 day EPA review. Prior to initial operation under these ATCs, the applicant must submit a Title V application for an administrative amendment, and permit conditions will be listed as follows:

- {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 NSR Rule]
- {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]

District Rule 4001 New Source Performance Standards

40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Industrial Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction).

40 CFR Part 60, Subpart A, section 14, defines the meaning of modification to which the the standards are applicable. §60.14, paragraph (e)(5) states that the following will not be considered as a modification: *"the addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or replaced by a system which the Administrator determines to be less environmentally beneficial".*

No newly constructed or reconstructed units are proposed in this project, nor is the unit being modified (as defined above). Since the permittee is retrofitting the unit with an

equivalent size, or smaller, burner for compliance with District rules and regulations, the requirements of these sections do not apply to the unit.

District Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringlemann 1 or equivalent to 20% opacity. The equipment in this project is expected to continue to comply with the opacity limit of this rule.

District Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

Since the applicant is not proposing an increase in emissions or fuel usage with this project, a health risk assessment is not necessary and no further risk analysis is required.

District Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. As natural gas-fired combustion equipment emits negligible amounts of particulate matter, compliance with this rule is expected.

District Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO_2, NO_2, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to $\leq$ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 μm in diameter.

The existing emission rates for the affected combustion equipment are less than the limits allowed by this rule and are unchanged with this application except for NOx. However, NOx emissions are decreasing; therefore continued compliance is expected.

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

This rule limits NOx and CO emissions from boilers, steam generators, and process heaters rated greater than 5 MMBtu/hr. The subject units are currently in compliance with the

applicable provisions of this rule. Source testing, monitoring and recordkeeping requirements of Rule 4320 are equal to or more stringent than the requirements of this rule; therefore, continued compliance is expected

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

This rule limits NOx and CO emissions from boilers, steam generators, and process heaters rated greater than 5 MMBtu/hr. The subject units are currently in compliance with the applicable provisions of this rule. Source testing, monitoring and recordkeeping requirements of Rule 4320 are equal to or more stringent than the requirements of this rule; therefore, continued compliance is expected

District Rule 4320 Advance Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater than 5 MMBtu/hr

This rule limits NOx, CO, SO2 and PM10 emissions from boilers, steam generators and process heaters rated greater than 5 MMBtu/hr. This rule also provides a compliance option of payment of fees in proportion to the actual amount of NOx emitted over the previous year.

The units in this project are all rated at greater than 5 MMBtu/hr heat input. One compliance option is to equip the steam generators with a 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 existing burner will be tuned to meet a NOx emission limit of 9 ppmv @ 3% O2 (Rule 4320, Option C2b).

The following conditions will be included in the ATCs to reflect approval of alternate equivalent burners:

- 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 Rules 2201]

- 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]

- 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]

Section 5.1 NOx Emission Limits

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

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

Section 5.2.1 states that on and after the indicated Compliance Deadline, units shall not be operated in a manner which exceeds the applicable NOx limit specified in Table1 of this rule.

With a maximum heat input of 62.5 MMBtu/hr for the oilfield steam generators, the applicable emission limit category Section 5.2, Table 1, Category C2, from District Rule 4320 is as follows:

Rule 4320 NOx Emission Limits			
C. Oilfield Steam Generators	**NOx Limit**	**Authority to Construct**	**Compliance Deadline**
2. Units with a total rated heat input >20 MMBtu/hr	a) Standard Schedule 7 ppmv or 0.008 lb/MMBtu ; or	July 1, 2009	July 1, 2010
	b) Staged Enhanced Schedule Initial Limit 9 ppmv or 0.011 lb/MMBtu; and	July 1, 2011	July 1, 2012
	c) Final Limit 5 ppmv or 0.0062 lb/MMBtu	January 1, 2013	January 1, 2014

The following condition will be included in the ATCs to reflect compliance with Rule 4320 NOx requirements:

- Emission rates shall not exceed any of the following limits: NOx (as NO2): 9 ppmv @ 3% O2 or 0.011 lb/MMBtu (27.0 lb/day), CO: 43 ppmv @ 3%O2 or 0.032 lb/MMBtu (48.0 lb/day), PM10: 0.0076 lb/MMBtu (11.4 lb-PM10/day), or VOC: 0.008 lb/MMBtu (12.0 lb/day). [District Rule 2201, 4201, 4305, 4306 and 4320] Y

Section 5.6 Startup and Shutdown Provisions

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

Aera has proposed to retain existing start-up and shutdown duration limits of 2 hours and 2 hours, respectively. Emissions during start-up and shutdown will not be subject to the emission limits in Sections 5.2 and 5.2.2.

Shakedown Provision

Aera is requesting approval of a 60-day "shakedown" period for units to be retrofitted, after installation of the new low-NOx combustion equipment or the combustion modifications authorized by these ATCs. Aera requests that the units be allowed to operate at the current NOx emission limit of 15 ppmv @3%O2 until the shakedown period is completed. The shakedown period will not exceed 60 days nor extend beyond the applicable Rule 4320 compliance deadline. The following condition will be added to the ATCs:

- During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd @3% O2 or 0.018 lb/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 and shall make such records readily available for District inspection upon request. [District Rule 4320] N

Section 5.7 Monitoring Provisions

Section 5.7.1 requires that permit units subject to District Rule 4320, Section 5.2 shall either install and maintain an operational APCO approved Continuous Emission Monitoring System (CEMS) for NO_X, CO and O_2, or implement an APCO-approved alternate monitoring.

Consistent with current permit requirements, Aera proposes to continue implementing Alternate Monitoring Scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO_X, CO, and O_2 exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the ATCs to ensure compliance with the requirements of the proposed alternate monitoring plan:

- {4063} 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 analyzer that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]

- {4064} 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 the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320]

- {4065} 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]

- {4066} The permittee shall maintain records of: (1) the date and time of NO_X, CO, and O2 measurements, (2) the O2 concentration in percent by volume 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, 4306 and 4320]

Section 5.8 Compliance Determination

Section 5.8.1 requires that the operator of any unit shall have the option of complying with either the applicable heat input (lb/MMBtu), emission limits or the concentration (ppmv) emission limits specified in Section 5.2. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sampling). Therefore, the following condition will be listed on the ATCs as follows:

- {2976} The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]

Section 5.8.2 requires that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. Therefore, the following permit condition will be listed on the ATCs as follows:

- {2972} 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. [District Rules 4305, 4306 and 4320]

Section 5.8.4 requires that for emissions monitoring pursuant to Sections 5.7.1 and 6.3.1 using a portable NO_X analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive-minute period. Therefore, the following previously listed permit condition will be on the ATCs as follows:

- {2937} 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]

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

- {2980} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320]

Section 6.1 Recordkeeping

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

A permit condition will be listed on the permit as follows:

- {2983} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320]

Section 6.2, Test Methods

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

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

The following permit conditions will be listed on the permit as follows:

- {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

- 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 3Aor 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 GC-FPD/TCD performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306 and 4320]

Section 6.3, Compliance Testing

Section 6.3.1 requires that each unit subject to the NOx and CO emission limits shall be source tested at least once every 12 months, except if two consecutive annual source tests demonstrate compliance, source testing may be performed every 36 months. If such a source test demonstrates non-compliance, source testing shall revert to every 12 months. The following conditions will be included in the ATCs:

- This unit shall be tested for compliance with the NOx and CO emissions limits at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]

- Source testing to measure NOx, and CO emissions shall be conducted within 60 days of initial start-up and whenever flue gas recirculation rate is changed. [District Rules 2201, 4305, 4306 and 4320]

- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

Section 6.4, Emission Control Plan (ECP

Section 6.4 requires the operator of any unit to submit to APCO for approval an Emissions Control Plan no later than January 1, 2010. Aera has submitted an Emissions Control Plan.

Section 7.0, Compliance Schedule

Section 7.0 identifies the dates by which the operator shall submit an application for an ATC and the date by which the owner shall demonstrate compliance with this rule.

The units will be in compliance with the emissions limits listed in Table 1, Section 5.2 of this rule, and periodic monitoring and source testing as required by District Rule 4320. Therefore, requirements of the compliance schedule, as listed in Section 7.0 of District Rule 4320, are satisfied. No further discussion is required.

Conclusion

Conditions will be incorporated into the permit in order to ensure compliance with each section of this rule, see attached draft permit(s). Therefore, compliance with District Rule 4320 requirements is expected.

District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1

This rule applies to boilers, steam generators, and process heaters at NO_x Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. The units in this project are located west of I-5; therefore, the provisions of this rule do not apply.

District Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO_2, on a dry basis averaged over 15 consecutive minutes.

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

$$\text{Volume } SO_2 = \frac{n\,RT}{P}$$

With:

N = moles SO_2
T (Standard Temperature) = 60°F = 520°R
P (Standard Pressure) = 14.7 psi

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

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

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

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

There is no increase in emissions of any hazardous air pollutants as a result of this project. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

California Environmental Quality Act (CEQA)

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

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

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

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Issue the ATCs listed below subject to the permit conditions on the attached draft Authorities to Construct in Appendix I.

X. BILLING INFORMATION

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-1121-17-25	3020-02-H	Greater than 15 MMBtu/hr (62.5 MMBtu/hr)	$1030.00
C-1121-18-25	3020-02-H	Greater than 15 MMBtu/hr (62.5 MMBtu/hr)	$1030.00
C-1121-19-25	3020-02-H	Greater than 15 MMBtu/hr (62.5 MMBtu/hr)	$1030.00
C-1121-41-25	3020-02-H	Greater than 15 MMBtu/hr (62.5 MMBtu/hr)	$1030.00

APPENDICES

Appendix I: Current ATCs
Appendix II: Emissions Profile(s)
Appendix III: Title V Compliance Certification
Appendix IV: Draft Authority to Construct (ATCs)

APPENDIX I

Current ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-1121-17-24 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: 10000 MING AVE
P O BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL PRODUCTION
FRESNO COUNTY, CA

SECTION: 26 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
MODIFICATION OF SG S-9, 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH COEN QLN ULN BURNER AND FLUE GAS RECIRCULATION SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-18, '-19 AND '-41: INSTALL SULFATREAT VESSELS DOWNSTREAM OF LO-COST SCAVENGING SYSTEM FOR H2S REMOVAL AND LIMIT EXHAUST SOX EMISSIONS TO 9 PPMV @3% O2 FOR RULE 4320 COMPLIANCE

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. {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. Fuel consumption for the steam generator shall not exceed 1,500 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Combined quantity of well vent and tank vapor recovery gases combusted within steam generators '-17, '-18, '-19, and '-41, from the four CVR systems (C-1121-38, -39, -114, & -116) and the section 32 TVR system shall not exceed 675,000 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
C-1121-17-24 : Mar 22 2011 9:05AM -- DAVIDSOS : Joint Inspection NOT Required

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
6. Only natural gas, vapor recovery gas, or a combination of natural gas and vapor recovery gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Lo-Cost H2S scavenging system shall be used whenever vapor recovery gas is fired in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Emission rates shall not exceed any of the following limits: NOx (as NO2): 15 ppmv @ 3% O2 or 0.018 lb/MMBtu (27.0 lb/day), CO: 43 ppmv @ 3%O2 or 0.032 lb/MMBtu (48.0 lb/day), PM10: 0.0076 lb/MMBtu (11.4 lb-PM10/day), or VOC: 0.008 lb/MMBtu (12.0 lb/day). [District Rule 2201, 4201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. When fired on PUC quality natural gas, the SOx emissions rate shall not exceed 0.00285 lb/MMBtu. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
11. When fired on gases other than PUC quality natural gas, the SOx emissions rate shall not exceed 9 ppmv @ 3% O2 or 0.015 lb/MMBtu (22.8 lb/day). [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
12. Combined emissions of SOx, calculated as SO2, from the steam generators and the flare (C-1121-17, -18, -19, -41, & -168) shall not exceed 28,580 lb/yr. [District Rule 2201]
13. The sulfur content of treated waste gas exiting the H2S Scavenger System shall be determined on a daily basis by gas detector tube sampling. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
14. The sulfur content of the waste gas exiting the sulfur treatment system shall be tested weekly for sulfur content and higher heating value. If compliance with the sulfur emission limits has been demonstrated for 8 consecutive weeks, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. Testing shall be by grab sample analysis by GC-FPD/TCD or other District approved methods for H2S and mercaptans performed in the laboratory and EPA Method 19. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
15. Daily SOx emissions from combustion of waste gas shall be calculated based on the waste gas sulfur content as determined by gas detector tube sampling or the most recent laboratory analysis, whichever is greater. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
16. When source or type of gas changes, sampling for sulfur content shall be conducted within one week. A change in fuel type is defined as changing between any of the following: PUC-Quality gas, unprocessed field gas, or any field gas with any specific level of pretreatment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Within 60 days of startup and at least once every 12 months thereafter, unit shall be stack tested to demonstrate compliance with the SOx emission limit required by this permit (ppmv @3 % O2) using EPA Method 6C, Method 8 or ARB Method 100. Stack testing for SOx emissions in not required if unit was fired only on PUC quality natural during the 12 months prior to the compliance testing anniversary date. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

21. Subject to the definitions and requirements of Section 5.3, District Rule 4306, emission factor limitations of this permit shall not apply during periods of startup, shutdown, or refractory curing. Duration of startup and shutdown 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 in the heat exchanger section of the unit, and shall not exceed 30 hours per occurrence. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. 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

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. 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

25. 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

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 months 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, 6.3.1; 4306, 6.3.1, and 4351, 6.3.1]

27. The source 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. 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

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. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. 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

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2, and fuel gas sulfur content - ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rules 1081, 4305, 4306, 6.2, and 4351] Federally Enforceable Through Title V Permit

32. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory with sample collection by ARB certified testing laboratory and shall be witnessed or authorized by the District. [District Rule 1081, 3.0, 4.0 and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

34. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule2520, 9.3.2]

35. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the non-certified (non PUC/FERC regulated) natural gas being fired in the steam generator shall be determined using ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4406 (Amended December 17, 1992), and 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

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

39. Permittee shall maintain daily record of all natural gas consumption including waste gas consumption, fuel sulfur content, calculated SOx emissions, supplier certifications and test results to show compliance with the conditions of this permit. The operator shall record daily amount and type (s) of fuel(s) combusted and all dates on which unit is fired on any non certified fuel and record specific type(s) of non certified fuel used. [District Rule 1070 and District Rule 2520, section 9.4.2]

40. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]

41. ATCs C-1121-17-19, '-17-21, '-17-22, and '-17-23, shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

42. This ATC shall be implemented concurrent with ATCs C-1121-18-24, '-19-24, '-41-24, and '-168-10 [District Rule] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-1121-18-24 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: 10000 MING AVE
P O BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL PRODUCTION
FRESNO COUNTY, CA

SECTION: 29 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
MODIFICATION OF SG S-10, 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX BURNER, AND A FLUE GAS RECIRCULATION (FGR) SYSTEM SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-17, '-19 AND '-41: INSTALL SULFATREAT VESSELS DOWNSTREAM OF LO-COST SCAVENGING SYSTEM FOR H2S REMOVAL AND LIMIT EXHAUST SOX EMISSIONS TO 9 PPMV @3% O2 FOR RULE 4320 COMPLIANCE

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. {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. Fuel consumption for the steam generator shall not exceed 1,500 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Combined quantity of well vent and tank vapor recovery gases combusted within steam generators '-17, '-18, '-19, and '-41, from the four CVR systems (C-1121-38, -39, -114, & -116) and the section 32 TVR system shall not exceed 675,000 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
C-1121-18-24 . Mar 22 2011 9:05AM – DAVIDSOS : Joint Inspection NOT Required

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
6. Only natural gas, vapor recovery gas, or a combination of natural gas and vapor recovery gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Lo-Cost H2S scavenging system shall be used whenever vapor recovery gas is fired in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Emission rates shall not exceed any of the following limits: NOx (as NO2): 15 ppmv @ 3% O2 or 0.018 lb/MMBtu (27.0 lb/day), CO: 43 ppmv @ 3%O2 or 0.032 lb/MMBtu (48.0 lb/day), PM10: 0.0076 lb/MMBtu (11.4 lb-PM10/day), or VOC: 0.008 lb/MMBtu (12.0 lb/day). [District Rule 2201, 4201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. When fired on PUC quality natural gas, the SOx emissions rate shall not exceed 0.00285 lb/MMBtu. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
11. When fired on gases other than PUC quality natural gas, the SOx emissions rate shall not exceed 9 ppmv @ 3% O2 or 0.015 lb/MMBtu (22.8 lb/day). [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
12. Combined emissions of SOx, calculated as SO2, from the steam generators and the flare (C-1121-17, -18, -19, -41, & -168) shall not exceed 28,580 lb/yr. [District Rule 2201]
13. The sulfur content of treated waste gas exiting the H2S Scavenger System shall be determined on a daily basis by gas detector tube sampling. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
14. The sulfur content of the waste gas exiting the sulfur treatment system shall be tested weekly for sulfur content and higher heating value. If compliance with the sulfur emission limits has been demonstrated for 8 consecutive weeks, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. Testing shall be by grab sample analysis by GC-FPD/TCD or other District approved methods for H2S and mercaptans performed in the laboratory and EPA Method 19. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
15. Daily SOx emissions from combustion of waste gas shall be calculated based on the waste gas sulfur content as determined by gas detector tube sampling or the most recent laboratory analysis, whichever is greater. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
16. When source or type of gas changes, sampling for sulfur content shall be conducted within one week. A change in fuel type is defined as changing between any of the following: PUC-Quality gas, unprocessed field gas, or any field gas with any specific level of pretreatment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Within 60 days of startup and at least once every 12 months thereafter, unit shall be stack tested to demonstrate compliance with the SOx emission limit required by this permit (ppmv @3 % O2) using EPA Method 6C, Method 8 or ARB Method 100. Stack testing for SOx emissions in not required if unit was fired only on PUC quality natural during the 12 months prior to the compliance testing anniversary date. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

21. Subject to the definitions and requirements of Section 5.3, District Rule 4306, emission factor limitations of this permit shall not apply during periods of startup, shutdown, or refractory curing. Duration of startup and shutdown 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 in the heat exchanger section of the unit, and shall not exceed 30 hours per occurrence. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. 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

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. 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

25. 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

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 months 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, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1]

27. The source 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. 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

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. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. 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

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2, and fuel gas sulfur content - ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rules 1081, 4305, 4306, 6.2, and 4351] Federally Enforceable Through Title V Permit

32. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory with sample collection by ARB certified testing laboratory and shall be witnessed or authorized by the District. [District Rule 1081, 3.0, 4.0 and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

34. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule2520, 9.3.2]

35. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the non-certified (non PUC/FERC regulated) natural gas being fired in the steam generator shall be determined using ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rule 2520, 9:3.2] Federally Enforceable Through Title V Permit

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

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4406 (Amended December 17, 1992), and 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

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

39. Permittee shall maintain daily record of all natural gas consumption including waste gas consumption, fuel sulfur content, calculated SOx emissions, supplier certifications and test results to show compliance with the conditions of this permit. The operator shall record daily amount and type (s) of fuel(s) combusted and all dates on which unit is fired on any non certified fuel and record specific type(s) of non certified fuel used. [District Rule 1070 and District Rule 2520, section 9.4.2]

40. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]

41. ATCs C-1121-18-19, '-18-21, and '-18-22, and will be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

42. This ATC shall be implemented concurrent with ATCs C-1121-17-24, '-19-24, '-41-24, and '-168-10 [District Rule] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-1121-19-24 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: 10000 MING AVE
P O BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL PRODUCTION
FRESNO COUNTY, CA

SECTION: 29 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
MODIFICATION OF SG S-11, 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX BURNER AND A FLUE GAS RECIRCULATION (FGR) SYSTEM SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-17, '-18 AND '-41: INSTALL SULFATREAT VESSELS DOWNSTREAM OF LO-COST SCAVENGING SYSTEM FOR H2S REMOVAL AND LIMIT EXHAUST SOX EMISSIONS TO 9 PPMV @ 3% O2 FOR RULE 4320 COMPLIANCE

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. {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. Fuel consumption for the steam generator shall not exceed 1,500 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Combined quantity of well vent and tank vapor recovery gases combusted within steam generators '-17, '-18, '-19, and '-41, from the four CVR systems (C-1121-38, -39, -114, & -116) and the section 32 TVR system shall not exceed 675,000 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
C-1121-19-24 : Mar 22 2011 9:05AM -- DAVIDSOS : Joint Inspection NOT Required

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
6. Only natural gas, vapor recovery gas, or a combination of natural gas and vapor recovery gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Lo-Cost H2S scavenging system shall be used whenever vapor recovery gas is fired in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Emission rates shall not exceed any of the following limits: NOx (as NO2): 15 ppmv @ 3% O2 or 0.018 lb/MMBtu (27.0 lb/day), CO: 43 ppmv @ 3%O2 or 0.032 lb/MMBtu (48.0 lb/day), PM10: 0.0076 lb/MMBtu (11.4 lb-PM10/day), or VOC: 0.008 lb/MMBtu (12.0 lb/day). [District Rule 2201, 4201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. When fired on PUC quality natural gas, the SOx emissions rate shall not exceed 0.00285 lb/MMBtu. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
11. When fired on gases other than PUC quality natural gas, the SOx emissions rate shall not exceed 9 ppmv @ 3% O2 or 0.015 lb/MMBtu (22.8 lb/day). [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
12. Combined emissions of SOx, calculated as SO2, from the steam generators and the flare (C-1121-17, -18, -19, -41, & -168) shall not exceed 28,580 lb/yr. [District Rule 2201]
13. The sulfur content of treated waste gas exiting the H2S Scavenger System shall be determined on a daily basis by gas detector tube sampling. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
14. The sulfur content of the waste gas exiting the sulfur treatment system shall be tested weekly for sulfur content and higher heating value. If compliance with the sulfur emission limits has been demonstrated for 8 consecutive weeks, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. Testing shall be by grab sample analysis by GC-FPD/TCD or other District approved methods for H2S and mercaptans performed in the laboratory and EPA Method 19. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
15. Daily SOx emissions from combustion of waste gas shall be calculated based on the waste gas sulfur content as determined by gas detector tube sampling or the most recent laboratory analysis, whichever is greater. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
16. When source or type of gas changes, sampling for sulfur content shall be conducted within one week. A change in fuel type is defined as changing between any of the following: PUC-Quality gas, unprocessed field gas, or any field gas with any specific level of pretreatment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Within 60 days of startup and at least once every 12 months thereafter, unit shall be stack tested to demonstrate compliance with the SOx emission limit required by this permit (ppmv @3 % O2) using EPA Method 6C, Method 8 or ARB Method 100. Stack testing for SOx emissions in not required if unit was fired only on PUC quality natural during the 12 months prior to the compliance testing anniversary date. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

21. Subject to the definitions and requirements of Section 5.3, District Rule 4306, emission factor limitations of this permit shall not apply during periods of startup, shutdown, or refractory curing. Duration of startup and shutdown 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 in the heat exchanger section of the unit, and shall not exceed 30 hours per occurrence. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. 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

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. 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

25. 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

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 months 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, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1]

27. The source 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. 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

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. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. 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

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2, and fuel gas sulfur content - ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rules 1081, 4305, 4306, 6.2, and 4351] Federally Enforceable Through Title V Permit

32. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory with sample collection by ARB certified testing laboratory and shall be witnessed or authorized by the District. [District Rule 1081, 3.0, 4.0 and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

34. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule2520, 9.3.2]

35. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the non-certified (non PUC/FERC regulated) natural gas being fired in the steam generator shall be determined using ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4406 (Amended December 17, 1992), and 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

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

39. Permittee shall maintain daily record of all natural gas consumption including waste gas consumption, fuel sulfur content, calculated SOx emissions, supplier certifications and test results to show compliance with the conditions of this permit. The operator shall record daily amount and type (s) of fuel(s) combusted and all dates on which unit is fired on any non certified fuel and record specific type(s) of non certified fuel used. [District Rule 1070 and District Rule 2520, section 9.4.2]

40. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]

41. ATCs : C-1121-19-19, '-19-21, '-19-2, and '-19-23 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

42. This ATC shall be implemented concurrent with ATCs C-1121-17-24, '-18-24, '-41-24, and '-168-10 [District Rule] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-1121-41-24 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: 10000 MING AVE
P O BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL PRODUCTION
FRESNO COUNTY, CA

SECTION: 29 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (S-12) WITH COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-17, '-18 AND '-19: INSTALL SULFATREAT VESSELS DOWNSTREAM OF LO-COST SCAVENGING SYSTEM FOR H2S REMOVAL AND LIMIT EXHAUST SOX EMISSIONS TO 9 PPMV @ 3% O2 FOR RULE 4320 COMPLIANCE

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. {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. Fuel consumption for the steam generator shall not exceed 1,500 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Combined quantity of well vent and tank vapor recovery gases combusted within steam generators '-17, '-18, '-19, and '-41, from the four CVR systems (C-1121-38, -39, -114, & -116) and the section 32 TVR system shall not exceed 675,000 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
C-1121-41-24 : Mar 22 2011 9:05AM – DAVIDSOS : Joint Inspection NOT Required

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
6. Only natural gas, vapor recovery gas, or a combination of natural gas and vapor recovery gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Lo-Cost H2S scavenging system shall be used whenever vapor recovery gas is fired in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Emission rates shall not exceed any of the following limits: NOx (as NO2): 15 ppmv @ 3% O2 or 0.018 lb/MMBtu (27.0 lb/day), CO: 43 ppmv @ 3%O2 or 0.032 lb/MMBtu (48.0 lb/day), PM10: 0.0076 lb/MMBtu (11.4 lb-PM10/day), or VOC: 0.008 lb/MMBtu (12.0 lb/day). [District Rule 2201, 4201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. When fired on PUC quality natural gas, the SOx emissions rate shall not exceed 0.00285 lb/MMBtu. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
11. When fired on gases other than PUC quality natural gas, the SOx emissions rate shall not exceed 9 ppmv @ 3% O2 or 0.015 lb/MMBtu (22.8 lb/day). [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
12. Combined emissions of SOx, calculated as SO2, from the steam generators and the flare (C-1121-17, -18, -19, -41, & -168) shall not exceed 28,580 lb/yr. [District Rule 2201]
13. The sulfur content of treated waste gas exiting the H2S Scavenger System shall be determined on a daily basis by gas detector tube sampling. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
14. The sulfur content of the waste gas exiting the sulfur treatment system shall be tested weekly for sulfur content and higher heating value. If compliance with the sulfur emission limits has been demonstrated for 8 consecutive weeks, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. Testing shall be by grab sample analysis by GC-FPD/TCD or other District approved methods for H2S and mercaptans performed in the laboratory and EPA Method 19. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
15. Daily SOx emissions from combustion of waste gas shall be calculated based on the waste gas sulfur content as determined by gas detector tube sampling or the most recent laboratory analysis, whichever is greater. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
16. When source or type of gas changes, sampling for sulfur content shall be conducted within one week. A change in fuel type is defined as changing between any of the following: PUC-Quality gas, unprocessed field gas, or any field gas with any specific level of pretreatment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Within 60 days of startup and at least once every 12 months thereafter, unit shall be stack tested to demonstrate compliance with the SOx emission limit required by this permit (ppmv @3 % O2) using EPA Method 6C, Method 8 or ARB Method 100. Stack testing for SOx emissions in not required if unit was fired only on PUC quality natural during the 12 months prior to the compliance testing anniversary date. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

21. Subject to the definitions and requirements of Section 5.3, District Rule 4306, emission factor limitations of this permit shall not apply during periods of startup, shutdown, or refractory curing. Duration of startup and shutdown 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 in the heat exchanger section of the unit, and shall not exceed 30 hours per occurrence. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. 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

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. 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

25. 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

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 months 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, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1]

27. The source 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. 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

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. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. 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

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2, and fuel gas sulfur content - ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rules 1081, 4305, 4306, 6.2, and 4351] Federally Enforceable Through Title V Permit

32. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory with sample collection by ARB certified testing laboratory and shall be witnessed or authorized by the District. [District Rule 1081, 3.0, 4.0 and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

34. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule2520, 9.3.2]

35. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the non-certified (non PUC/FERC regulated) natural gas being fired in the steam generator shall be determined using ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4406 (Amended December 17, 1992), and 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

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

39. Permittee shall maintain daily record of all natural gas consumption including waste gas consumption, fuel sulfur content, calculated SOx emissions, supplier certifications and test results to show compliance with the conditions of this permit. The operator shall record daily amount and type (s) of fuel(s) combusted and all dates on which unit is fired on any non certified fuel and record specific type(s) of non certified fuel used. [District Rule 1070 and District Rule 2520, section 9.4.2]

40. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]

41. ATCs C-1121-41-19, '-41-21, 41-22, and '-41-23 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

42. This ATC shall be implemented concurrent with ATCs C-1121-17-24, '-18-24, '-19-24, and '-168-10 [District Rule] Federally Enforceable Through Title V Permit

APPENDIX II

Emissions Profile

Permit #: C-1121-17-25	**Last Updated**
Facility: AERA ENERGY LLC	03/21/2011 DAVIDSOS

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	6023.0	8332.0	19564.0	20805.0	4380.0
Daily Emis. Limit (lb/Day)	54.0	22.8	53.6	57.0	12.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-958.0	0.0	0.0	0.0	0.0
Q2:	-958.0	0.0	0.0	0.0	0.0
Q3:	-958.0	0.0	0.0	0.0	0.0
Q4:	-958.0	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 #: C-1121-18-25	**Last Updated**
Facility: AERA ENERGY LLC	03/21/2011 DAVIDSOS

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	6023.0	8322.0	29751.0	16702.0	4176.0
Daily Emis. Limit (lb/Day)	51.5	22.8	81.5	45.8	11.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-843.0	0.0	0.0	0.0	0.0
Q2:	-843.0	0.0	0.0	0.0	0.0
Q3:	-843.0	0.0	0.0	0.0	0.0
Q4:	-843.0	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:					

Application Emissions

Permit #: C-1121-19-25	Last Updated
Facility: AERA ENERGY LLC	03/21/2011 DAVIDSOS

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	6023.0	8332.0	29751.0	16702.0	4176.0
Daily Emis. Limit (lb/Day)	51.5	22.8	81.5	45.8	11.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-843.0	0.0	0.0	0.0	0.0
Q2:	-843.0	0.0	0.0	0.0	0.0
Q3:	-843.0	0.0	0.0	0.0	0.0
Q4:	-843.0	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 #: C-1121-41-25	**Last Updated**
Facility: AERA ENERGY LLC	03/21/2011 DAVIDSOS

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	6023.0	8322.0	29751.0	16702.0	4176.0
Daily Emis. Limit (lb/Day)	51.5	22.8	81.5	45.8	11.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-843.0	0.0	0.0	0.0	0.0
Q2:	-843.0	0.0	0.0	0.0	0.0
Q3:	-843.0	0.0	0.0	0.0	0.0
Q4:	-843.0	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 III

Title V Compliance Certification

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

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[X] SIGNIFICANT PERMIT MODIFICATION
[ ] MINOR PERMIT MODIFICATION
[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: Aera Energy LLC	FACILITY ID: C - 1121
1. Type of Organization:[X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name: Aera Energy LLC	
3. Agent to the Owner: N/A	

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

(KP) Based on information and belief formed after reasonable inquiry, the emissions units identified in this application will continue to comply with the applicable federal requirement(s).

(KP) Based on information and belief formed after reasonable inquiry, the emissions units identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

(KP) Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

(KP) 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] — 3/22-11

Signature of Responsible Official — Date

K. A. Peck

Name of Responsible Official (please print)

Operations Manager

Title of Responsible Official (please print)

COC for Project C-110471 (Permits C-1121-17, -18, -19, & -41 9 ppmv NOx)

APPENDIX IV

Draft Authority to Construct (ATCs)

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-1121-17-25 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: 10000 MING AVE
P O BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL PRODUCTION
FRESNO COUNTY, CA

SECTION: 26 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
MODIFICATION OF SG S-9, 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH COEN QLN ULN BURNER AND FLUE GAS RECIRCULATION SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-18, '-19 AND '-41: 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

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. {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 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] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director/APCO

DRAFT

DAVID WARNER, Director of Permit Services
C-1121-17-25 : Apr 13 2011 1:20PM – KARRSR : Joint Inspection NOT Required

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] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Fuel consumption for the steam generator shall not exceed 1,500 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Combined quantity of well vent and tank vapor recovery gases combusted within steam generators '-17, '-18, '-19, and '-41, from the four CVR systems (C-1121-38, -39, -114, & -116) and the section 32 TVR system shall not exceed 675,000 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. Only natural gas, vapor recovery gas, or a combination of natural gas and vapor recovery gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Lo-Cost H2S scavenging system shall be used whenever vapor recovery gas is fired in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
12. Emission rates shall not exceed any of the following limits: NOx (as NO2): 9 ppmv @ 3% O2 or 0.011 lb/MMBtu (27.0 lb/day), CO: 43 ppmv @ 3%O2 or 0.032 lb/MMBtu (48.0 lb/day), PM10: 0.0076 lb/MMBtu (11.4 lb-PM10/day), or VOC: 0.008 lb/MMBtu (12.0 lb/day). [District Rule 2201, 4201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. When fired on PUC quality natural gas, the SOx emissions rate shall not exceed 0.00285 lb/MMBtu. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
14. When fired on gases other than PUC quality natural gas, the SOx emissions rate shall not exceed 9 ppmv @ 3% O2 or 0.015 lb/MMBtu (22.8 lb/day). [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
15. Combined emissions of SOx, calculated as SO2, from the steam generators and the flare (C-1121-17, -18, -19, -41, & -168) shall not exceed 28,580 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The sulfur content of treated waste gas exiting the H2S Scavenger System shall be determined on a daily basis by gas detector tube sampling. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
17. The sulfur content of the waste gas exiting the sulfur treatment system shall be tested weekly for sulfur content and higher heating value. If compliance with the sulfur emission limits has been demonstrated for 8 consecutive weeks, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. Testing shall be by grab sample analysis by GC-FPD/TCD or other District approved methods for H2S and mercaptans performed in the laboratory and EPA Method 19. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. Daily SOx emissions from combustion of waste gas shall be calculated based on the waste gas sulfur content as determined by gas detector tube sampling or the most recent laboratory analysis, whichever is greater. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
19. When source or type of gas changes, sampling for sulfur content shall be conducted within one week. A change in fuel type is defined as changing between any of the following: PUC-Quality gas, unprocessed field gas, or any field gas with any specific level of pretreatment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. Within 60 days of startup and at least once every 12 months thereafter, unit shall be stack tested to demonstrate compliance with the SOx emission limit required by this permit (ppmv @3 % O2) using EPA Method 6C, Method 8 or ARB Method 100. Stack testing for SOx emissions in not required if unit was fired only on PUC quality natural during the 12 months prior to the compliance testing anniversary date. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

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

22. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

23. Subject to the definitions and requirements of Section 5.6, District Rule 4320, emission factor limitations of this permit shall not apply during periods of startup, shutdown, or refractory curing. 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. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd @3% O2 or 0.018 lb/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 and shall make such records readily available for District inspection upon request. [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 analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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. If either the NOX or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

28. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent by volume 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, 4306 and 4320] Federally Enforceable Through Title V Permit

29. 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 months 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

30. Source testing to measure NOx, and CO emissions shall be conducted within 60 days of initial start-up and whenever flue gas recirculation rate is changed. [District Rules 2201and 4320] Federally Enforceable Through Title V Permit

31. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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, 4306 and 4320] Federally Enforceable Through Title V Permit

33. 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. 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

34. 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

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3Aor 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 GC-FPD/TCD 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

36. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory with sample collection by ARB certified testing laboratory and shall be witnessed or authorized by the District. [District Rule 1081, 3.0, 4.0 and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

37. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

38. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2]

39. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the non-certified (non PUC/FERC regulated) natural gas being fired in the steam generator shall be determined using ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

41. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4406 (Amended December 17, 1992), and 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

43. Permittee shall maintain daily record of all natural gas consumption including waste gas consumption, fuel sulfur content, calculated SOx emissions, supplier certifications and test results to show compliance with the conditions of this permit. The operator shall record daily amount and type (s) of fuel(s) combusted and all dates on which unit is fired on any non certified fuel and record specific type(s) of non certified fuel used. [District Rule 1070 and District Rule 2520, section 9.4.2] Federally Enforceable Through Title V Permit

44. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

45. ATC C-1121-17-20 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

46. ATC C-1121-17-24 shall be implemented prior to or concurrent with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-1121-18-25 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: 10000 MING AVE
P O BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL PRODUCTION
FRESNO COUNTY, CA

SECTION: 29 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
MODIFICATION OF SG S-10, 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX BURNER, AND A FLUE GAS RECIRCULATION (FGR) SYSTEM SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-17, '-19 AND '-41: 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

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. {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 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] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
C-1121-18-25 : Apr 13 2011 1:22PM – KARRSR : Joint Inspection NOT Required

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] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Fuel consumption for the steam generator shall not exceed 1,500 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Combined quantity of well vent and tank vapor recovery gases combusted within steam generators '-17, '-18, '-19, and '-41, from the four CVR systems (C-1121-38, -39, -114, & -116) and the section 32 TVR system shall not exceed 675,000 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. Only natural gas, vapor recovery gas, or a combination of natural gas and vapor recovery gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Lo-Cost H2S scavenging system shall be used whenever vapor recovery gas is fired in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
12. Emission rates shall not exceed any of the following limits: NOx (as NO2): 9 ppmv @ 3% O2 or 0.011 lb/MMBtu (27.0 lb/day), CO: 43 ppmv @ 3%O2 or 0.032 lb/MMBtu (48.0 lb/day), PM10: 0.0076 lb/MMBtu (11.4 lb-PM10/day), or VOC: 0.008 lb/MMBtu (12.0 lb/day). [District Rule 2201, 4201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. When fired on PUC quality natural gas, the SOx emissions rate shall not exceed 0.00285 lb/MMBtu. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
14. When fired on gases other than PUC quality natural gas, the SOx emissions rate shall not exceed 9 ppmv @ 3% O2 or 0.015 lb/MMBtu (22.8 lb/day). [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
15. Combined emissions of SOx, calculated as SO2, from the steam generators and the flare (C-1121-17, -18, -19, -41, & -168) shall not exceed 28,580 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The sulfur content of treated waste gas exiting the H2S Scavenger System shall be determined on a daily basis by gas detector tube sampling. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
17. The sulfur content of the waste gas exiting the sulfur treatment system shall be tested weekly for sulfur content and higher heating value. If compliance with the sulfur emission limits has been demonstrated for 8 consecutive weeks, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. Testing shall be by grab sample analysis by GC-FPD/TCD or other District approved methods for H2S and mercaptans performed in the laboratory and EPA Method 19. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. Daily SOx emissions from combustion of waste gas shall be calculated based on the waste gas sulfur content as determined by gas detector tube sampling or the most recent laboratory analysis, whichever is greater. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
19. When source or type of gas changes, sampling for sulfur content shall be conducted within one week. A change in fuel type is defined as changing between any of the following: PUC-Quality gas, unprocessed field gas, or any field gas with any specific level of pretreatment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. Within 60 days of startup and at least once every 12 months thereafter, unit shall be stack tested to demonstrate compliance with the SOx emission limit required by this permit (ppmv @3 % O2) using EPA Method 6C, Method 8 or ARB Method 100. Stack testing for SOx emissions in not required if unit was fired only on PUC quality natural during the 12 months prior to the compliance testing anniversary date. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

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

22. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

23. Subject to the definitions and requirements of Section 5.6, District Rule 4320, emission factor limitations of this permit shall not apply during periods of startup, shutdown, or refractory curing. 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. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd @3% O2 or 0.018 lb/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 and shall make such records readily available for District inspection upon request. [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 analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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. If either the NOX or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

28. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent by volume 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, 4306 and 4320] Federally Enforceable Through Title V Permit

29. 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 months 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

30. Source testing to measure NOx, and CO emissions shall be conducted within 60 days of initial start-up and whenever flue gas recirculation rate is changed. [District Rules 2201and 4320] Federally Enforceable Through Title V Permit

31. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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, 4306 and 4320] Federally Enforceable Through Title V Permit

33. 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. 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

34. 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

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3Aor 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 GC-FPD/TCD 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

36. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory with sample collection by ARB certified testing laboratory and shall be witnessed or authorized by the District. [District Rule 1081, 3.0, 4.0 and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

37. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

38. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2]

39. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the non-certified (non PUC/FERC regulated) natural gas being fired in the steam generator shall be determined using ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

41. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4406 (Amended December 17, 1992), and 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

43. Permittee shall maintain daily record of all natural gas consumption including waste gas consumption, fuel sulfur content, calculated SOx emissions, supplier certifications and test results to show compliance with the conditions of this permit. The operator shall record daily amount and type (s) of fuel(s) combusted and all dates on which unit is fired on any non certified fuel and record specific type(s) of non certified fuel used. [District Rule 1070 and District Rule 2520, section 9.4.2] Federally Enforceable Through Title V Permit

44. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

45. ATC C-1121-18-20 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

46. ATC C-1121-18-24 shall be implemented prior to or concurrent with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-1121-19-25 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: 10000 MING AVE
P O BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL PRODUCTION
FRESNO COUNTY, CA

SECTION: 29 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
MODIFICATION OF SG S-11, 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX BURNER AND A FLUE GAS RECIRCULATION (FGR) SYSTEM SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-17, '-18 AND '-41: 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

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. {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 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] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 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
C-1121-19-25 : Apr 13 2011 1:24PM – KARRGR : Joint Inspection NOT Required

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] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Fuel consumption for the steam generator shall not exceed 1,500 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Combined quantity of well vent and tank vapor recovery gases combusted within steam generators '-17, '-18, '-19, and '-41, from the four CVR systems (C-1121-38, -39, -114, & -116) and the section 32 TVR system shall not exceed 675,000 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. Only natural gas, vapor recovery gas, or a combination of natural gas and vapor recovery gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Lo-Cost H2S scavenging system shall be used whenever vapor recovery gas is fired in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
12. Emission rates shall not exceed any of the following limits: NOx (as NO2): 9 ppmv @ 3% O2 or 0.011 lb/MMBtu (27.0 lb/day), CO: 43 ppmv @ 3%O2 or 0.032 lb/MMBtu (48.0 lb/day), PM10: 0.0076 lb/MMBtu (11.4 lb-PM10/day), or VOC: 0.008 lb/MMBtu (12.0 lb/day). [District Rule 2201, 4201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. When fired on PUC quality natural gas, the SOx emissions rate shall not exceed 0.00285 lb/MMBtu. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
14. When fired on gases other than PUC quality natural gas, the SOx emissions rate shall not exceed 9 ppmv @ 3% O2 or 0.015 lb/MMBtu (22.8 lb/day). [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
15. Combined emissions of SOx, calculated as SO2, from the steam generators and the flare (C-1121-17, -18, -19, -41, & -168) shall not exceed 28,580 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The sulfur content of treated waste gas exiting the H2S Scavenger System shall be determined on a daily basis by gas detector tube sampling. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
17. The sulfur content of the waste gas exiting the sulfur treatment system shall be tested weekly for sulfur content and higher heating value. If compliance with the sulfur emission limits has been demonstrated for 8 consecutive weeks, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. Testing shall be by grab sample analysis by GC-FPD/TCD or other District approved methods for H2S and mercaptans performed in the laboratory and EPA Method 19. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. Daily SOx emissions from combustion of waste gas shall be calculated based on the waste gas sulfur content as determined by gas detector tube sampling or the most recent laboratory analysis, whichever is greater. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
19. When source or type of gas changes, sampling for sulfur content shall be conducted within one week. A change in fuel type is defined as changing between any of the following: PUC-Quality gas, unprocessed field gas, or any field gas with any specific level of pretreatment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. Within 60 days of startup and at least once every 12 months thereafter, unit shall be stack tested to demonstrate compliance with the SOx emission limit required by this permit (ppmv @3 % O2) using EPA Method 6C, Method 8 or ARB Method 100. Stack testing for SOx emissions in not required if unit was fired only on PUC quality natural during the 12 months prior to the compliance testing anniversary date. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

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

22. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

23. Subject to the definitions and requirements of Section 5.6, District Rule 4320, emission factor limitations of this permit shall not apply during periods of startup, shutdown, or refractory curing. 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. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd @3% O2 or 0.018 lb/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 and shall make such records readily available for District inspection upon request. [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 analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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. If either the NOX or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

28. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent by volume 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, 4306 and 4320] Federally Enforceable Through Title V Permit

29. 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 months 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

30. Source testing to measure NOx, and CO emissions shall be conducted within 60 days of initial start-up and whenever flue gas recirculation rate is changed. [District Rules 2201and 4320] Federally Enforceable Through Title V Permit

31. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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, 4306 and 4320] Federally Enforceable Through Title V Permit

33. 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. 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

34. 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

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3Aor 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 GC-FPD/TCD 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

36. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory with sample collection by ARB certified testing laboratory and shall be witnessed or authorized by the District. [District Rule 1081, 3.0, 4.0 and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

37. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

38. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2]

39. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the non-certified (non PUC/FERC regulated) natural gas being fired in the steam generator shall be determined using ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

41. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4406 (Amended December 17, 1992), and 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

43. Permittee shall maintain daily record of all natural gas consumption including waste gas consumption, fuel sulfur content, calculated SOx emissions, supplier certifications and test results to show compliance with the conditions of this permit. The operator shall record daily amount and type (s) of fuel(s) combusted and all dates on which unit is fired on any non certified fuel and record specific type(s) of non certified fuel used. [District Rule 1070 and District Rule 2520, section 9.4.2] Federally Enforceable Through Title V Permit

44. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

45. ATC C-1121-19-20 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

46. ATC C-1121-19-24 shall be implemented prior to or concurrent with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-1121-41-25 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: 10000 MING AVE
P O BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL PRODUCTION
FRESNO COUNTY, CA

SECTION: 29 **TOWNSHIP:** 19S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR THERMOTICS, NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (S-12) WITH COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION SERVED BY LO-COST H2S SCAVENGER SYSTEM SHARED WITH PERMIT UNITS C-1121-17, '-18 AND '-19: 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

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. {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 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] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
C-1121-41-25 : Apr 13 2011 1:23PM – KARRSR : Joint Inspection NOT Required

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] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Fuel consumption for the steam generator shall not exceed 1,500 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Combined quantity of well vent and tank vapor recovery gases combusted within steam generators '-17, '-18, '-19, and '-41, from the four CVR systems (C-1121-38, -39, -114, & -116) and the section 32 TVR system shall not exceed 675,000 scf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. Only natural gas, vapor recovery gas, or a combination of natural gas and vapor recovery gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Lo-Cost H2S scavenging system shall be used whenever vapor recovery gas is fired in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
12. Emission rates shall not exceed any of the following limits: NOx (as NO2): 9 ppmv @ 3% O2 or 0.011 lb/MMBtu (27.0 lb/day), CO: 43 ppmv @ 3%O2 or 0.032 lb/MMBtu (48.0 lb/day), PM10: 0.0076 lb/MMBtu (11.4 lb-PM10/day), or VOC: 0.008 lb/MMBtu (12.0 lb/day). [District Rule 2201, 4201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. When fired on PUC quality natural gas, the SOx emissions rate shall not exceed 0.00285 lb/MMBtu. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
14. When fired on gases other than PUC quality natural gas, the SOx emissions rate shall not exceed 9 ppmv @ 3% O2 or 0.015 lb/MMBtu (22.8 lb/day). [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
15. Combined emissions of SOx, calculated as SO2, from the steam generators and the flare (C-1121-17, -18, -19, -41, & -168) shall not exceed 28,580 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The sulfur content of treated waste gas exiting the H2S Scavenger System shall be determined on a daily basis by gas detector tube sampling. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
17. The sulfur content of the waste gas exiting the sulfur treatment system shall be tested weekly for sulfur content and higher heating value. If compliance with the sulfur emission limits has been demonstrated for 8 consecutive weeks, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. Testing shall be by grab sample analysis by GC-FPD/TCD or other District approved methods for H2S and mercaptans performed in the laboratory and EPA Method 19. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. Daily SOx emissions from combustion of waste gas shall be calculated based on the waste gas sulfur content as determined by gas detector tube sampling or the most recent laboratory analysis, whichever is greater. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
19. When source or type of gas changes, sampling for sulfur content shall be conducted within one week. A change in fuel type is defined as changing between any of the following: PUC-Quality gas, unprocessed field gas, or any field gas with any specific level of pretreatment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. Within 60 days of startup and at least once every 12 months thereafter, unit shall be stack tested to demonstrate compliance with the SOx emission limit required by this permit (ppmv @3 % O2) using EPA Method 6C, Method 8 or ARB Method 100. Stack testing for SOx emissions in not required if unit was fired only on PUC quality natural during the 12 months prior to the compliance testing anniversary date. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

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

22. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

23. Subject to the definitions and requirements of Section 5.6, District Rule 4320, emission factor limitations of this permit shall not apply during periods of startup, shutdown, or refractory curing. 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. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd @3% O2 or 0.018 lb/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 and shall make such records readily available for District inspection upon request. [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 analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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. If either the NOX or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

28. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent by volume 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, 4306 and 4320] Federally Enforceable Through Title V Permit

29. 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 months 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

30. Source testing to measure NOx, and CO emissions shall be conducted within 60 days of initial start-up and whenever flue gas recirculation rate is changed. [District Rules 2201and 4320] Federally Enforceable Through Title V Permit

31. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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, 4306 and 4320] Federally Enforceable Through Title V Permit

33. 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. 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

34. 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

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3Aor 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 GC-FPD/TCD 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

36. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory with sample collection by ARB certified testing laboratory and shall be witnessed or authorized by the District. [District Rule 1081, 3.0, 4.0 and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

37. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

38. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2]

39. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the non-certified (non PUC/FERC regulated) natural gas being fired in the steam generator shall be determined using ASTM D 1072, D 4468, D 4084, D 3246, or double GC for H2S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

41. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4406 (Amended December 17, 1992), and 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

43. Permittee shall maintain daily record of all natural gas consumption including waste gas consumption, fuel sulfur content, calculated SOx emissions, supplier certifications and test results to show compliance with the conditions of this permit. The operator shall record daily amount and type (s) of fuel(s) combusted and all dates on which unit is fired on any non certified fuel and record specific type(s) of non certified fuel used. [District Rule 1070 and District Rule 2520, section 9.4.2] Federally Enforceable Through Title V Permit

44. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

45. ATC C-1121-41-20 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

46. ATC C-1121-41-24 shall be implemented prior to or concurrent with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit