San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUG 3 1 2010

Mr. Timothy Alburger
Seneca Resources
2131 Mars Court
Bakersfield, CA 93308

Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # S-1114
Project # S-1100733

Dear Mr. Alburger:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Seneca Resources within the Midway Sunset Oilfield, CA. Seneca proposes to modify one steam generator by lowering the NOx limit and limiting the fuel gas sulfur content in order to comply with Rule 4320. Seneca is also proposing to install two new identical steam generators that will share the same daily and annual potential emissions as the one being modified.

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: KR/cm

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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AUG 31 2010

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 # S-1114
Project # S-1100733

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Seneca Resources within the Midway Sunset Oilfield, CA, which has been issued a Title V permit. Seneca Resources is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. Seneca proposes to modify one steam generator by lowering the NOx limit and limiting the fuel gas sulfur content in order to comply with Rule 4320. Seneca is also proposing to install two new identical steam generators that will share the same daily and annual potential emissions as the one being modified.

Enclosed is the engineering evaluation of this application, along with the current Title V permit, and proposed Authorities to Construct # S-1114-10-25, '-74-10, 107-2, '-114-0, and '-115-0 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: KR/cm

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AUG 3 1 2010

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 # S-1114
Project # S-1100733

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Seneca Resources within the Midway Sunset Oilfield, CA. Seneca proposes to modify one steam generator by lowering the NOx limit and limiting the fuel gas sulfur content in order to comply with Rule 4320. Seneca is also proposing to install two new identical steam generators that will share the same daily and annual potential emissions as the one being modified.

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: KR/cm

Enclosures

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

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 Seneca Resources for its thermally enhanced oil recovery operation within the Midway Sunset Oilfield, California. Seneca proposes to modify one steam generator by lowering the NOx limit and limiting the fuel gas sulfur content in order to comply with Rule 4320. Seneca is also proposing to install two new identical steam generators that will share the same daily and annual potential emissions as the one being modified.

The analysis of the regulatory basis for these proposed actions, Project #S-1100733, 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, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.**

San Joaquin Valley Air Pollution Control District
Authority to Construct

Modify Gas-Fired Steam Generator for Rule 4320 Compliance and Install new Steam Generators

Facility Name:	Seneca Resources	Date:	July 23, 2010
Mailing Address:	2131 Mars Court	Engineer:	Kris Rickards
	Bakersfield, CA 93308	Lead Engineer:	Leonard Scandura
Contact Person:	Tim Alburger		
Telephone:	661-399-4270 x3544		
Fax:	661-399-7706		
Application #(s):	S-1114-10-25, '-74-10, '-107-2, '-114-0, and '-115-0		
Project #:	S-1100733		
Deemed Complete:	March 8, 2010		

I. PROPOSAL

Seneca Resources (hereafter referred to as Seneca) is requesting an Authority to Construct (ATC) for the modification of a TEOR/natural gas-fired steam generator (S-1114-107) located within their Heavy Oil Western Stationary Source. In order to comply with District Rule 4320 requirements the applicant proposes to remove the TEOR gas firing capability of the unit, limit fuel gas sulfur content to less than 1 gr-S/100 dscf, and lower the NO_X limit to 7 ppmv.

Seneca is also requesting Authority to Construct two new steam generators identical to unit S-1114-107. These new generators will share the annual emissions limits for all pollutants (specific limiting condition or SLC) of the existing unit and be approved to operate in the same locations.

There will not be an increase in potential emissions of any pollutant as a result of this project. Modification of the NO_X emission limit and limiting the sulfur content in the fuel are proposed solely to comply with District Rule 4320 requirements.

Unit S-1114-107 currently shares a SO_X scrubber and SO_X limit with units '-10 and '-74. Since the ability to burn TEOR gas is being removed from this permit it will no longer exhaust through the SO_X scrubber. The existing SLC for SO_X will be removed from unit '-107 and the SLC will be reduced for units '-10 and '-74 so that no increase in SO_X occurs (no other modification to permits or equipment is proposed for units '-10 and '-74).

Reducing the SLC for SO_X listed on units S-1114-10 and '-74, to account for the reduction from removing unit '-107 from the SLC (a result of Rule 4320 modifications), is not considered a NSR modification (see compliance section).

In addition, the facility currently follows Alternate Monitoring Scheme "A" using a portable analyzer, according to District Policy SSP-1105, and is requesting to maintain the current monitoring arrangement. Seneca operates heavy oil sources S-1114 and S-3755 (previously Ivanhoe). Seneca is also proposing to operate this steam generator in various specified locations (areas from both S-1114 and S-3755).

Due to the large amount of steam generators being modified to comply with Rule 4320 in Seneca's Heavy Oil Western Stationary Source this project is considered a major modification.

Seneca received their Title V Permit on April 14, 2006. 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. Seneca must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

Outstanding ATCs S-1114-10-23 and '-74-8 include current operating conditions and are in the process of being incorporated into Seneca's Title V permit via Administrative Amendment project S-1072042 (see current operating permits and implemented ATCs in Appendix A).

II. APPLICABLE RULES

Rule 2201 New and Modified Stationary Source Review Rule (9/21/06)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)
Rule 4305 Boilers, Steam Generators and Process Heaters – Phase II (8/21/03)
Rule 4306 Boilers, Steam Generators and Process Heaters – Phase III (10/16/08)
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
Rule 4405 Oxides Of Nitrogen Emissions From Existing Steam Generators Used In Thermally Enhanced Oil Recovery -Central And Western Kern County Fields (12/17/92)
Rule 4406 Sulfur Compounds From Oil-Field Steam Generators – Kern County (12/17/92)
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

These steam generators will operate at Sections 14 & 15, T31S, R22E, Sections 18, 19, and 20, T11N, R23W, and Section 24, T26S, R20E within Seneca's Heavy Oil Western Stationary Source. The equipment will not be located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. PROCESS DESCRIPTION

Seneca operates permitted equipment within their Heavy Oil Western stationary source, 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.

V. EQUIPMENT LISTING

Pre-Project Equipment Description:

S-1114-10-23: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STRUTHERS STEAM GENERATOR WITH LOW NOX BURNER AND O2 CONTROLLER SERVED BY AIRPOL DUAL VALVE TRAY SOX SCRUBBER WITH CHEVRON TYPE MIST ELIMINATOR AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH S-1114-10, -74 AND -107

S-1114-74-8: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (CUSA ID # 50-1-15A, DIS# 43005-78) WITH O2 CONTROLLER SERVED BY SO2 SCRUBBER LISTED IN S-1114-10

S-1114-107-1: 77.6 MMBTU/HR TEOR/NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER SERVED BY SO2 SCRUBBER AND WET ESP LISTED IN S-1114-10

Proposed Modification:

S-1114-10-25: MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STRUTHERS STEAM GENERATOR WITH LOW NOX BURNER AND O2 CONTROLLER SERVED BY AIRPOL DUAL VALVE TRAY SOX SCRUBBER WITH CHEVRON TYPE MIST ELIMINATOR AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH S-1114-10, '-74: REMOVE UNIT '-107 FROM SLC CONDITION

S-1114-74-10: MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (CUSA ID # 50-1-15A, DIS# 43005-78) WITH O2 CONTROLLER SERVED BY SO2 SCRUBBER LISTED IN S-1114-10: REMOVE UNIT '-107 FROM SLC CONDITION

S-1114-107-2: MODIFICATION OF 77.6 MMBTU/HR TEOR/NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER SERVED BY SO2 SCRUBBER AND WET ESP LISTED IN S-1114-10: REMOVE TEOR GAS FIRING, LOWER NOX TO 7 PPMV AND LIMIT FUEL GAS SULFUR CONTENT FOR RULE 4320, AND INCLUDE WITH UNITS '-114 AND '-115 IN SPECIFIC LIMITING CONDITION FOR NOX, SOX, PM10, CO, AND VOC

Post Project Equipment Description:

S-1114-10-25: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STRUTHERS STEAM GENERATOR WITH LOW NOX BURNER AND O2 CONTROLLER SERVED BY AIRPOL DUAL VALVE TRAY SOX SCRUBBER WITH CHEVRON TYPE MIST ELIMINATOR AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH S-1114-10, '-74

S-1114-74-10: 62.5 MMBTU/HR NATURAL /TEOR GAS FIRED STEAM GENERATOR (CUSA ID # 50-1-15A, DIS# 43005-78) WITH O2 CONTROLLER AND SO2 SCRUBBER AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH UNIT S-1114-10

S-1114-107-2: 77.6 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER

S-1114-114-0: 77.6 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER

S-1114-115-0: 77.6 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

Ultra 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 the reaction between the excess oxygen with nitrogen is minimized.

For steam generator S-1114-107, Seneca is proposing to comply with Rule 4320 Table 1, Category C.2.a for NO_X (Standard Schedule, 7 ppmv, or 0.008 lb/MMBtu, NO_X) and limit the fuel gas sulfur content (per section 5.4.1.2) to less than 1 gr-S/100 dscf.

Results of the source test conducted May 2008 for unit S-1114-107 (NO_X emissions of 7.5 ppmv @ 3% O_2) show the 7 ppmv Rule 4320 limit can be achieved with minor tuning of the existing burner. No modifications are proposed for units S-1114-10 and '-74.

VII. GENERAL CALCULATIONS

A. Assumptions

- The maximum operating schedule is 24 hours per day
- Units S-1114-107, '-114, and '-115 are fired on natural gas
- Natural Gas Heating Value: 1,000 Btu/scf (APR-1720)
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)
- There will be no change in currently permitted, daily nor annual, potential to emit for CO or VOC
- There will be no increase in annual emissions as a result of installing new steam generators S-1114-114 and '-115 (SLC for all pollutants shared with unit '-107); therefore calculations for units '-114 and '-115 are not required
- There will be no change in potential emissions for units S-1114-10 and '-74; therefore calculations for units '-10 and '-74 are not required (only a reduction in the SLC for these two units to accommodate unit '-107 emissions splitting off from the SLC is needed, discussed in the Rule 2201 Daily Emission Limits section). Therefore units S-1114-10 and '-74 are not included in the emission calculations.

B. Emission Factors

Pre-Project Emission Factors (EF1)

Permit Unit	Pollutant	Pre-Project Emission Factors (EF1)		Source
S-1114-107	NO_X	0.017 lb/MMBtu	14 ppmvd NO_x (@ 3% O_2)	Current Permit
	SO_X	0.324 lb/MMBtu	224 ppmv (@0% O_2)	Current Permit
	PM_{10}	0.030 lb/MMBtu	- -	Current Permit

Post-Project Emission Factors (EF2)

The SO_x emission factor is calculated as follows for this unit fired on natural gas (limited to 1 gr-S/100 dscf) and is converted to lb-SO_x/MMBtu by the following equation:

$$\left(\frac{64\,lb-SO_x}{32\,lb-S}\right)\frac{1\,gr-S}{100\,dscf}\left(\frac{1\,lb}{7{,}000\,gr}\right)\frac{dscf}{1{,}000\,Btu}\left(\frac{10^6\,Btu}{MMBtu}\right)=0.00285\frac{lb-SO_x}{MMBtu}$$

The PM_{10} emission factor is reduced since the unit will fire on PUC gas, consistent with AP-42 Table 1.4-2.

The resulting maximum emission rates are summarized in the following table:

Permit Unit	Pollutant	Post Project Emission Factors (EF2)		Source
S-1114-107	NO_X	0.008 lb/MMBtu	7 ppmvd NO_x (@ 3% O_2)	Rule 4320 Table 1 Category C.2.a
	SO_X	0.00285 lb/MMBtu	- -	Rule 4320 Section 5.4.1.1
	PM_{10}	0.0076 lb/MMBtu	- -	AP-42 Table 1.4-2

C. Calculations

There is no change in emission rates and potential to emit for CO and VOC emissions for any unit; therefore, these pollutants are not calculated in this project. CO and VOC emissions and emissions for units '-10 and '-74 are taken from the District's permit administration system and summarized with the calculated emissions in the tables below.

Calculations for units S-1114-10 and '-74 are solely to determine revised SO_X SLC once unit '-107 is removed from existing SLC.

1. Pre-Project Potential to Emit (PE1)

The PE1 for each pollutant is calculated with the following equation (and summarized on the next tables):

PE1 = EF1 (lb/MMBtu) × Heat Input (MMBtu/hr) × Op. Sched. (hr/day or hr/year)

Daily PE1 (lb/day):

Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
S-1114-10	27.0	486.0	45.0	46.5	8.3
S-1114-74	27.0	486.0	45.0	31.5	8.3
S-1114-107	31.6	603.4	55.9	57.7	10.2

Annual PE1 (lb/yr):

Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
S-1114-10	9,855	264,490[1]	16,425	16,973	3,011
S-1114-74	9,855		16,425	11,498	3,011
S-1114-107	11,556		20,393	21,073	3,739

[1] SLC for SO_X covering units S-1114-10, '-74, and '-107.

2. Post-Project Potential to Emit (PE2)

The PE2 for each pollutant is calculated with the following equation (and summarized on the next tables):

PE2 = EF2 (lb/MMBtu) × Heat Input (MMBtu/hr) × Op. Sched. (hr/day or hr/year)

Daily PE2 (lb/day):

Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
S-1114-10	27.0	486.0	45.0	46.5	8.3
S-1114-74	27.0	486.0	45.0	31.5	8.3
S-1114-107	14.9	5.3	14.2	57.7	10.2
S-1114-114	14.9	5.3	14.2	57.7	10.2
S-1114-115	14.9	5.3	14.2	57.7	10.2

Annual PE2 (lb/yr):

Emissions for steam generators S-1114-107, '-114, and '-115 will share annual limits (annual emissions will be listed on existing permit unit '-107 only) and summarized in the following tables (no change in emissions for permit units S-1114-10 and '-74 except a reduction in the SO_X SLC to account for emissions associated with unit '-107 being removed from the SLC):

Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
S-1114-10	9,855	264,490 – 1,937 = **262,553**	16,425	16,973	3,011
S-1114-74	9,855		16,425	11,498	3,011
S-1114-107	5,438[2]	1,937[2]	5,166[2]	21,073[2]	3,739[2]
S-1114-114					
S-1114-115					

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, or
- An offset threshold will be surpassed, or
- A Stationary Source Increase in Permitted Emissions (SSIPE) public notice is triggered

[2] SLC for this pollutant covering units S-1114-107, '-114, and '-115.

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.

The Pre-Project Stationary Source Potential to Emit (SSPE1) is summarized below (see Appendix D for details).

Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Pre-Project SSPE (SSPE1)	105,397	597,740	93,861	281,251	136,002

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.

The Post Project Stationary Source Potential to Emit (SSPE2) is summarized below (see Appendix E for details).

Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Post Project SSPE (SSPE2)	99,279	597,740	78,634	281,251	136,002

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).

Major Source Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Pre-Project SSPE (SSPE1)	105,397	597,740	93,861	281,251	136,002
Post Project SSPE (SSPE2)	99,279	597,740	78,634	281,251	136,002
Major Source Threshold	50,000	140,000	140,000	200,000	50,000
Major Source?	Yes	Yes	No	Yes	Yes

This source is an existing Major Source for NO_X, SO_X, CO, and VOC only 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.

Pursuant to Section 3.7 of District Rule 2201, BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22 of District Rule 2201.

Reducing the SLC for SO_X listed on units S-1114-10 and '-74, to account for the reduction from removing unit '-107 from the SLC, is not considered an NSR modification (see compliance section) provided the overall emissions from all affected units (pre-project SLC) on an annual basis is not increasing, each unit's PE is not increasing, and there are no changes in the method of operation. As each of these requirements are met, these units previously in the SLC are not subject to NSR and baseline emissions calculations are not required.

Units S-1114-114 and '-115 are new units; therefore, BE = 0 for all pollutants associated with these new steam generators.

S-1114-107:

This unit meets the requirements of BACT guideline 1.2.1 (see Appendix B) for all pollutants. Therefore baseline emissions will be equal to preproject emissions.

7. Major Modification

This facility is an existing major source for NO_X, SO_X, and VOC.

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 PM10, 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:

Major Modification Thresholds (Existing Major Source)			
Pollutant	Project PE (lb/year)	Threshold (lb/year)	Major Modification?
NO_x	>50,000	50,000	Yes[3]
SO_x	>80,000	80,000	Yes[3]
PM_{10}	>30,000	30,000	No[4]
VOC	>50,000	50,000	Yes[3]

Therefore, this project is a major modification and public notice is required.

8. Federal Major Modification

Pursuant to Rule 2201 Section 3.17 to determine if a project is a Federal major modification, the calculation procedure in 40 CFR 51.165(a)(2)(ii) shall be used.

This calculation procedure states that if the sum of the differences between the projected actual emissions and the baseline actual emissions (for existing emission units) or the sum of the potentials to emit (for new emission units) is significant, i.e. greater than the values listed in Rule 2201 Table 3-1, the project is a Federal major modification.

For existing emission units where there is no increase in design capacity the projected actual emissions (PAE) are equal to the emission rate at which the unit is projected to emit in any one year selected by the operator within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity). This projection is made by the operator and must be based on all relevant information, e.g. expected business activity.

[3] Due to the large number of affected units proposed by Seneca for facilities S-1114 and S-3755 for Rule 4320 compliance this project, in conjunction with others (and considering that boilers and steam generators typically have actual emissions below their permitted emission levels), is presumed to cross one or more major modification thresholds.
[4] Not a major source for PM_{10}

For emission units (other than electric utility steam generating units) the baseline actual emissions (BAE) are calculated based on any 24 month period selected by the operator within the previous 10 year period. These emissions must not include any non-compliant operation.

In calculating the emission increase (PAE – BAE), the portion of the emissions after the project that the unit could have actually emitted (during the same period used to determine BAE) that are unrelated to the particular project and emissions due to increased product demand are excluded.

For rule compliance projects, the difference between the PAE and the BAE (excluding emissions that the unit could have emitted during the baseline period) for pollutants targeted by the subject rule will be a negative value.

Additionally, it can reasonably be concluded that the difference between the PAE and the BAE (excluding emissions that the unit could have emitted during the baseline period) for non-targeted pollutants will be zero as any increase in actual emissions (after the project) would be due to increases in business activity and not due to the modification itself. Such emission increases are excluded when calculating the emission increase.

Modifying Units S-1114-10, '-74, and '-107 are solely for rule compliance and will result in a negative emission increase.

Emissions increases calculated pursuant to this section are significant if they exceed the significance thresholds specified in the table below. The following table compares the total potential to emit for units S-1114-114 and '-115 to the federal major modification thresholds:

Significant Threshold (lb/year)			
Pollutant	Non-Rule Compliance PE (lb/year)	Threshold (lb/year)	Major Modification?
VOC	3,789	50,000	No
NO_x	5,438	50,000	No
PM_{10}	5,166	30,000	No
SO_x	1,937	80,000	No

As explained in the discussion above and shown in the table, this project will not result in a significant emission increase and therefore is not a Federal major modification.

VIII. COMPLIANCE

District Rule 2201 New and Modified Stationary Source Review Rule

The following are considered modifications under Rule 2201 (per Section 3.24):

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

Reducing the SLC for potential annual SO_X emissions by removing unit '-107 from the SLC involving it, '-10, and '-74 is not an NSR modification as defined above[5]. The overall emissions from all affected units (pre-project SLC) on an annual basis is not increasing, each unit's PE is not increasing, and there are no changes in the method of operation. Additionally, units S-1114-10 and '-74 are not new units; therefore, modifications S-1114-10-25 and '-74-10 are not for new equipment nor are they being modified as defined by Rule 2201.

For remaining units:

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.

[5] The SO_X SLC is being reduced solely because unit '-107 is being modified for Rule 4320 compliance and as such will no longer burn sour gas or be served by the scrubber serving '-10 and '-74. As such, the reduction in the SLC is related to the Rule 4320 compliance modification of '-107.

a. New emissions units – PE > 2 lb/day

As seen in Section VII.C.2 of this evaluation, the applicant is proposing to install two new steam generators (S-1114-114 and '-115) with a PE greater than 2 lb/day for NO_X, SO_X, PM_{10}, CO, and VOC.

BACT is triggered for NO_X, SO_X, PM_{10}, CO and VOC since the PEs are greater than 2 lbs/day.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, these emissions units are not being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

AIPE = PE2 – HAPE

Where,
AIPE = Adjusted Increase in Permitted Emissions, (lb/day)
PE2 = Post-Project Potential to Emit, (lb/day)
HAPE = Historically Adjusted Potential to Emit, (lb/day)

HAPE = PE1 x (EF2/EF1)

Where,
PE1 = The emissions unit's Potential to Emit prior to modification or relocation, (lb/day)
EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1
EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

AIPE = PE2 – (PE1 * (EF2 / EF1))

S-1114-107:

$AIPE_{NOx}$ = 14.9 – (31.6 * (0.008/0.017))
= 14.9 – 31.6 * 0.47
= 0.0 lb/day

$AIPE_{SOx}$ = 5.3 – (603.4 * (0.00285/0.324))
= 5.3 – 603.4 * 0.0088
= 0.0 lb/day

$AIPE_{PM10}$ = 14.2 – (55.9 * (0.0076/0.030))
= 14.2 – 55.9 * 0.25
= 0.2 lb/day

$AIPE_{CO}$ = 57.7 – (57.7 * (1†))
= 57.7 – 57.7 * 1
= 0.0 lb/day

†CO emission factor is not changing as a result of this project.

$AIPE_{VOC}$ = 10.2 – (10.2 * (1†))
= 10.2 – 10.2 * 1
= 0.0 lb/day

†VOC emission factor is not changing as a result of this project.

As demonstrated above, the AIPE is not greater than 2.0 lb/day for any emissions; therefore BACT is not triggered.

d. Major Modification

As discussed in Section VII.C.7 above, this project constitutes a Major Modification for NO_X, SO_X, and VOC; therefore BACT is triggered for NO_X, SO_X, and VOC.

2. BACT Guideline

Please note that BACT Guideline 1.2.1 [Steam Generator (≥ 5 MMBtu/hr, Oilfield)] has been rescinded. The NO_X emission limit requirement of District Rule 4320 is lower than the Achieved-in-Practice requirement of BACT Guideline 1.2.1 (14 ppmv @ 3% O2); therefore a project specific BACT analysis will be performed to determine BACT for this project. More details regarding this are provided in Appendix C.

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see Appendix C), BACT has been satisfied with the following:

NO_X: 7 ppmvd @ 3% O_2
SO_X: Natural gas treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf
PM_{10}: Natural gas treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf
CO: 50 ppmvd or less @ 3% O_2
VOC: Gaseous fuel

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Post Project SSPE (SSPE2)	99,279	597,740	78,634	281,251	136,002
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	Yes	Yes	Yes	Yes

2. Quantity of Offsets Required

Offset calculations will be required for modified unit S-1114-107 and new units '-114 and '-115.

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,
PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)
ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE)

The PE2 for these units is the SLC that is established for all pollutants. Baseline Emissions are equal to the PE for unit S-1114-107. There are no increases in cargo carrier emissions. Offset requirements can be determined as follows (summarized in the following table):

Offsets Required (lb/year) = Σ(PE2 – BE)

Permit No.	Total Annual PE2 [lbs per year]				
	NO_X	SO_X	PM_{10}	CO	VOC
S-1114-107	5,438	1,937	5,166	21,073	3,739
S-1114-114	0[6]	0[6]	0[6]	0[6]	0[6]
S-1114-115	0[6]	0[6]	0[6]	0[6]	0[6]

Permit No.	Baseline Emissions (BE) [lbs per year]				
	NO_X	SO_X	PM_{10}	CO	VOC
S-1114-107	11,556	220,241	20,393	21,073	3,739
S-1114-114	0	0	0	0	0
S-1114-115	0	0	0	0	0

Permit No.	Offset Requirements (PE2 - BE) [lbs per year]				
	NO_X	SO_X	PM_{10}	CO	VOC
S-1114-107	-6,118	-218,304	-15,227	0	0
S-1114-114	0	0	0	0	0
S-1114-115	0	0	0	0	0

Therefore, offsets will not be 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. 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

As demonstrated in section VII.C.5 above, the facility is not becoming a Major Source as a result of this project.

b. Major Modification

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

[6] Zero annual emissions are assessed to these units as the potential to emit all pollutants is included in the potential to emit for unit S-1114-107 (fully offset unit, see project S-1062358)

c. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project; therefore public noticing is not required for this project for Potential to Emit exceeding the 100 lb/day limit.

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

An SSIPE exceeding 20,000 pounds per year for any one pollutant triggers public notice, where SSIPE = SSPE2 - SSPE1.

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, public notice will be required for this project.

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 these units are based on the use of natural gas as a fuel and will be stated in the form of emission factors as shown:

S-1114-10 and 74:

- Emission rate of SOx from S-1114-10~~,~~ and '-74 ~~and '-107~~ shall not exceed ~~264,490~~ 262,553 lb/yr. [District Rule 2201]

- ~~Emission rate of SOx from S-1114-10, '-74 and '-107 shall not exceed 972.0 lb/day. [District Rule 2201]~~

  *maximum daily emissions from S-1114-10 and '-74 are 972.0 lb/day (with the removal of '-107 a daily SLC is not required)

S-1114-107, '-114, and '-115:

- Emissions rates shall not exceed any of the following: NOx (as NO2): 7 ppmv @ 3% O2 or 0.008 lb/MMBtu, SOx (as SO2) 0.00285 lb/MMBtu~~ or 2 ppmv @ 0% O2~~, PM10: 0.0076 lb/MMBtu, CO: 42 ppmv @ 3% O2 or 0.031 lb/MMBtu, or VOC: 0.0055 lb/MMBtu~~ or 13 ppmv @ 3% O2~~. [District Rules 2201, 4305, 4306, and 4320~~, and 40 CFR 60.43c~~]

- Combined maximum emissions from steam generators S-1114-107, '-114, and '-115 shall not exceed any of the following limits: 5,438 lb-NOx/yr, 1,937 lb-SOx/yr, 5,166 lb-PM10/yr, 21,073 lb-CO/yr, and 3,739 lb-VOC/yr. [District Rules 2201, 4305, 4306, and 4320]

- Maximum annual fuel consumption in steam generators S-1114-107, '-114, and '-115 shall not exceed 679,776 MMBtu/yr. [District Rule 2201]

- Permittee shall maintain annual records of combined fuel use (in MMBtu/year) for steam generators S-1114-107, '-114, and '-115. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

These units 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, in accordance with District Rules 4305, 4306, and 4320 have been included on the ATCs.

2. Monitoring

As required by 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,* these units are subject to monitoring requirements. Monitoring requirements, in accordance with District Rules 4305, 4306, and 4320 have been included on the ATCs.

3. Recordkeeping

As required by 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* these units are subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rules 4305, 4306, and 4320 have been included on the ATCs.

- Permittee shall maintain records of fuel gas sulfur content and higher heating value. [District Rule 2201]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

District Rule 2520 Federally Mandated Operating Permits

Seneca has a Title V permit. The changes authorized by these ATCs constitute a minor modification of their Title V permit. As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment prior to operating with the proposed modifications 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 Rule 2201]
- {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]

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).

These steam generators have a rating of 62.5 to 77.6 MMBtu/hr and are fired on natural gas. Subpart Dc has no standards for gas-fired steam generators. Therefore subpart Dc does not apply.

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.

These units are fired exclusively on gaseous fuel. Therefore, compliance with District Rule 4101 requirements is expected.

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.

The following condition is listed on the facility wide permit:

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

As demonstrated above, there are no increases in emissions for units S-1114-10, '-74, or '-107, therefore a health risk assessment is not necessary for these modifications and no further risk analysis is required.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (Appendix G), the total facility prioritization score including this project was greater than one. Therefore, a health risk assessment was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-1114-114-0	1.01 per million	Yes
S-1114-115-0	1.01 per million	Yes

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is required for this project because the HRA indicates the risk is above the District's thresholds for triggering T-BACT requirements.

For this project T-BACT is triggered for VOC. T-BACT is satisfied with BACT for VOC (see Appendix C), which is the exclusive use of gaseous fuel; therefore, compliance with the District's Risk Management Policy is expected.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 10 in a million). As outlined by the HRA Summary in Appendix G of this report, the emissions increases for this project were determined to be less than significant.

To ensure that human health risks will not exceed District allowable levels; the following permit conditions will be listed on ATCs S-1114-114 and '-115:

- {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

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.

F-Factor for NG:	8,578 dscf/MMBtu at 60 °F
PM10 Emission Factor:	0.0713 lb-PM10/MMBtu (worst case, S-1114-10)
Percentage of PM as PM10 in Exhaust:	100%
Exhaust Oxygen (O_2) Concentration:	3%
Excess Air Correction to F Factor =	$\frac{20.9}{(20.9 - 3)} = 1.17$

$$GL = \left(\frac{0.0713\ lb-PM}{MMBtu} \times \frac{7{,}000\ grain}{lb-PM}\right) / \left(\frac{8{,}578\ ft^3}{MMBtu} \times 1.17\right)$$

$$GL = 0.05\ grain/dscf < 0.1\ grain/dscf$$

Therefore, compliance with District Rule 4201 requirements 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 ≤ 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.

District Rule 4301 Limits (lb/hr)			
Pollutant	**NO_2**	**Total PM**	**SO_2**
	1.13	4.46	20.25
Rule Limit (lb/hr)	140	10	200

The above table indicates compliance with the maximum lb/hr emissions in this rule (using the worst case emissions factors condsidering all units in this project); therefore, continued compliance is expected.

District Rule 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters

Pursuant to District Rules 4305 and 4306, Section 6.3.1, the steam generators are not required to tune since they follow District approved Alternate Monitoring scheme A, where the applicable emission limits are periodically monitored. Therefore, the units are not subject to this rule.

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

These units are natural gas-fired with maximum heat inputs of 62.5 - 77.6 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the units are subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2.*

In addition, these units are also subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3.*

Since the emissions limits of District Rule 4306 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4306 requirements will satisfy the requirements of District Rule 4305.

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

These units are natural gas-fired with a maximum heat inputs of 62.5 - 77.6 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4306, these units are subject to District Rule 4306.

In addition, these units are also subject to *District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters 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 rated greater than 5 MMBtu/hr heat input. Therefore this rule applies.

Units S-1114-10 and '-74 fire on vapor recovery gas and are allowed additional time before being required to comply with the provisions of this rule (as indicated in section 5.1 below). Seneca has submitted an emission control plan (project S-1095539) and has indicated that these units will comply with Rule 4320 before the compliance deadline. Therefore, compliance with this rule is expected for these units and further discussion is not required.

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 NO_x limit specified in Table 1 of this rule.

With a maximum heat input of 77.6 MMBtu/hr for these steam generators the applicable emission limit category Section 5.2, Table 1, Category C.2.a (units firing on >50% PUC quality gas), from District Rule 4320 are 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

As shown in the previous table, the 7 ppmvd @ 3% O2 NOx limit proposed for the steam generators in this project is consistent with one of the compliance options allowed by the rule.

Daily emission limiting conditions have been included in section VIII.D. Compliance with section 5.2 is expected.

Section 5.4 Particulate Matter Control Requirements

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

5.4.1.1 On and after the applicable NOx Compliance Deadline specified in Section 5.2 Table 1, operators shall fire units exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases;

5.4.1.2 On and after the applicable NOx Compliance Deadline specified in Section 5.2 Table 1, operators shall limit fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet; or

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

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

Seneca will address the particulate matter by limiting the fuel sulfur content to less than 1 gr-S/100 dscf.

The following condition will be listed on the permit (daily limit is based on 1.0 gr-S/100 dscf ensuring compliance with 5 gr limit required by Rule 4320):

- Emissions rates shall not exceed any of the following: NOx (as NO2): 7 ppmv @ 3% O2 or 0.008 lb/MMBtu, **SOx (as SO2) 0.00285 lb/MMBtu or 2 ppmv @ 0% O2**, PM10: 0.0076 lb/MMBtu, CO: 42 ppmv @ 3% O2 or 0.031 lb/MMBtu, or VOC: 0.0055 lb/MMBtu or 13 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, 4320, and 40 CFR 60.43c]

Compliance with section 5.4 is expected.

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, Seneca 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 5.7.6 requires operators complying with Sections 5.4.1.1 or 5.4.1.2 to provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit To Operate. Sulfur analysis shall be performed in accordance with the test methods in Section 6.2 and records are required to be kept on site and provided upon District request.

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 test 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. 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:

- All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320]

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 ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, 4306, and 4320]

Section 6.3, Compliance Testing

Section 6.3.1 requires that this unit be tested to determine compliance with the applicable requirements of section 5.1 and 5.2.3 not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to thirty-six months.

The following conditions will be listed on the permit:

- Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320]
- Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]
- The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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

The applicant does not use representative testing for these steam generators. Therefore, Section 6.3.2 does not apply.

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. Seneca 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 existing unit 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 ATC in Appendix I. Therefore, compliance with District Rule 4320 requirements is expected.

District Rule 4405 Oxides of Nitrogen Emissions from Existing Steam Generators Used in Thermally Enhanced Oil Recovery – Central and Western Kern County Fields

This rule limits NOx emissions from existing steam generators used in thermally enhanced oil recovery operations prior to August 22, 1986. The steam generators in this project are subject to a NOx limit well below the 0.14 lb/MMBTU limit allowed by this rule for natural gas-fired units. Therefore, continued compliance is expected.

District Rule 4406 Sulfur Compounds from Oil-Field Steam Generators – Kern County

This rule limits SO_X emissions from existing steam generators used in oil field operations prior to September 12, 1979. Sulfur compound emissions (as S) from the steam generators in this facility are limited to an average rate below the 0.11 lb/MMBTU limit as allowed by the rule. Since this project results in the reduced SO_X emission rate, continued compliance is expected.

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 (using worst case emission factors from units S-1114-10 and '-74 of 0.324 lb-SO_X/MMBtu):

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

With:

N = moles SO_2
T (Standard Temperature) = 60°F = 520°R
P (Standard Pressure) = 14.7 psi
R (Universal Gas Constant) = $\frac{10.73\,\text{psi}\cdot\text{ft}^3}{\text{lb}\cdot\text{mol}\cdot{}^\circ\text{R}}$

$$\frac{0.324\,lb-SOx}{MMBtu}\times\frac{MMBtu}{8{,}578\,dscf}\times\frac{1\,lb\cdot mol}{64\,lb}\times\frac{10.73\,psi\cdot ft^3}{lb\cdot mol\cdot{}^\circ R}\times\frac{520^\circ R}{14.7\,psi}\times\frac{1{,}000{,}000\cdot parts}{million}=224\frac{parts}{million}$$

$SulfurConcentration = 224\,\frac{parts}{million}$ < 2,000 ppmv (or 0.2%)

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

This facility is not located within 1,000 feet of a school. 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.

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

Project specific impacts on global climate change were evaluated consistent with the adopted District policy – *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The District's engineering evaluation (this document - Appendix H) demonstrates that the project includes Best Performance Standards (BPS) for each class and category of greenhouse gas emissions unit. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

The following conditions will be listed on permits S-1114-114-0 and '-115-0 to ensure compliance:

- This unit shall be equipped with horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input. [CEQA]
- This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]
- Documentation showing that this unit is equipped with a horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input and equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump shall be retained on site. [CEQA]

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. 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. Pending a successful EPA review period, issue Authorities to Construct S-1114-107-2, '-114-0, and '-115-0 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**
S-1114-10-25	3020-02-H	62.5 MMBtu/hr	$1,030
S-1114-74-10	3020-02-H	62.5 MMBtu/hr	$1,030
S-1114-107-2	3020-02-H	77.6 MMBtu/hr	$1,030
S-1114-114-0	3020-02-H	77.6 MMBtu/hr	$1,030
S-1114-115-0	3020-02-H	77.6 MMBtu/hr	$1,030

Appendices

Appendix A:	Current Operating Permits and Implemented Authorities to Construct
Appendix B:	BACT Guideline
Appendix C:	BACT Analysis
Appendix D:	SSPE1 Tabulation
Appendix E:	SSPE2 Tabulation
Appendix F:	TVFORM-009
Appendix G:	HRA Summary
Appendix H:	Manufacturer Guarantee
Appendix I:	Draft ATCs

Appendix A

Current Operating Permits and Implemented Authorities to Construct

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1114-74-8 **ISSUANCE DATE:** 12/14/2006

LEGAL OWNER OR OPERATOR: SENECA RESOURCES
MAILING ADDRESS: 2131 MARS COURT
BAKERSFIELD, CA 93308-6830

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (CUSA ID # 50-1-15A, DIS# 43005-78) WITH O2 CONTROLLER AND SO2 SCRUBBER LISTED IN S-1114-10: ADD S-1114-107 AS A STEAM GENERATOR SHARING THE SCRUBBER

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 NSR Rule] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Generator is authorized to operate at the following locations: SE15, T31S/R22E and NE24, T26W/R20E. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made in writing no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
6. When operating at SE15, T31S/R22E, scrubber/wet ESP shall be used when burning TEOR gas. TEOR gas firing is not authorized when steam generator operates at NE24, T26W/R20E. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1114-74-8 : Aug 2 2010 9:44AM – RICKARDK : Joint Inspection NOT Required

7. Steam generator firebox convection section, scrubber/wet ESP bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Emission rate of SOx from S-1114-10, '-74 and '-107 shall not exceed 264,490 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Emission rate of SOx from S-1114-10, '-74 and '-107 shall not exceed 972.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: NOx: 0.018 lb/MMBtu or 15 ppmv @ 3% O2, PM10: 0.0713 lb/MMBtu except as provided below, SOx (as SO2): 0.324 lb/MMBtu or 224 ppmv @ 0% O2, VOC: 0.0055 lb/MMBtu or 13 ppmv @ 3% O2, or CO: 29 ppmv at 3% O2 or 0.021 lb/MMBtu. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

11. When steam generator S-1114-107 is exhausting through the scrubber, PM10 emission rates at the stack shall not exceed 0.030 lb PM10/MMBtu. [District Rule 2201]

12. At no time shall TEOR gas introduced to this unit and all units connected to scrubber/wet ESP exceed the amount introduced during a source test demonstrating compliance with permit limits. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

14. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

15. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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

17. 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

18. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

20. 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

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

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

CONDITIONS CONTINUE ON NEXT PAGE

23. 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, sulfur oxides - ARB Methods 1-6 or EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

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

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

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

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

28. Permittee shall maintain records of fuel gas and TEOR gas sulfur contents and annual consumption of each. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Fuel gas sulfur content shall be determined using ASTM D3246 or double GC for H2S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

31. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

32. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit

33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, and 4306. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

35. When the scrubber is operating, the scrubber liquor pH shall be recorded every 15 minutes. [40 CFR part 64] Federally Enforceable Through Title V Permit

36. An excursion from the scrubber liquor pH level is defined as a daily pH reading of less than 6 or greater than 8. Upon detecting any excursion from the acceptable pH level, the permittee shall investigate the excursion and take corrective action to restore required pH level and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit

37. Records of scrubber pH monitoring equipment downtime, scrubber pH level excursions, and scrubber operation shall be maintained. [40 CFR part 64] Federally Enforceable Through Title V Permit

38. The scrubber pH sensor shall be calibrated annually. Calibration of the pH sensor shall be conducted by comparison of the sensor reading with a laboratory measurement of the scrubber recirculation fluid. [40 CFR part 64] Federally Enforceable Through Title V Permit

39. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit

40. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit

41. If the District or EPA determine that a Quality improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit

42. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

43. This ATC shall be implemented concurrently with, or subsequently to S-1114-74-7. [District Rule 2201] Federally Enforceable Through Title V Permit

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1114-10-23 **ISSUANCE DATE:** 12/14/2006

LEGAL OWNER OR OPERATOR: SENECA RESOURCES
MAILING ADDRESS: 2131 MARS COURT
BAKERSFIELD, CA 93308-6830

LOCATION: HEAVY OIL WESTERN
CA

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS FIRED STRUTHERS STEAM GENERATOR WITH LOW NOX BURNER AND O2 CONTROLLER SERVED BY AIRPOL DUAL VALVE TRAY SOX SCRUBBER WITH CHEVRON TYPE MIST ELIMINATOR SHARED WITH S-1114-10 AND S-1114-74: ADD S-1114-107 AS A STEAM GENERATOR SHARING THE SCRUBBER

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 NSR Rule] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Make. model number, and specifications of Wet Electrostatic Precipitator shall be submitted to the District prior to implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Total fuel consumption, including TEOR gas, shall not exceed 511,000 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall install and maintain operational non-resettable, totalizing mass or volumetric flow meter(s) in the fuel (natural gas and TEOR gas) line(s) of the unit. Permittee shall determine the higher heating value (hhv) of the fuels (natural gas and TEOR gas) on a quarterly basis once per calendar quarter and whenever there is a change in the source of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1114-10-23 : Aug 2 2010 9:44AM -- RICKARDK : Joint Inspection NOT Required

6. Exhaust from unit shall be directed only to SO2 scrubber/wet ESP authorized herein except when burning PUC regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Scrubber/wet ESP shall be in operation when combusting TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Emission rate of SOx from S-1114-10, '-74 and '-107 shall not exceed 264,490 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rate of SOx from S-1114-10, '-74 and '-107 shall not exceed 972.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic, including sodium hydroxide and sodium carbonate. Other caustics may be used upon written District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Scrubber liquor pH shall be maintained between 6 and 8, and shall be continuously monitored. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Scrubber mist eliminator shall be properly cleaned and maintained. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than 8.0 gpm/1000 acfm. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 2201] Federally Enforceable Through Title V Permit

16. When any unit connected to scrubber/wet ESP is burning TEOR gas, scrubber/wet ESP shall be operating and permittee shall demonstrate compliance with PM10 and sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter unless no TEOR gas has been burned since the last scrubber performance source test. Sulfur removal efficiency of scrubber/wet ESP shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least quarterly. [District NSR Rule 2201] Federally Enforceable Through Title V Permit

17. When unit is operated without scrubber/wet ESP, permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content within 60 days of initiating operation without scrubber. Analyses, as approved by the APCO, provided by the gas supplier may be used to satisfy this requirement. [District Rule 2201] Federally Enforceable Through Title V Permit

18. When complying with PM10 and SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100 or ARB Methods 1-6. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit

19. At no time shall amount of TEOR gas introduced to this unit and all units connected to scrubber/wet ESP exceed the amount introduced during a source test demonstrating compliance with permit limits. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Emissions rates shall not exceed any of the following: NOx (as NO2): 15 ppmv @ 3% O2 or 0.018 lb/MMBtu, SOx (as SO2) 0.324 lb/MMBtu or 224 ppmv @ 0% O2, PM10: 0.0713 lb/MMBtu except as provided below, CO: 42 ppmv @ 3% O2 or 0.031 lb/MMBtu, or VOC: 0.0055 lb/MMBtu or 13 ppmv @ 3% O2. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. When steam generator S-1114-107 is exhausting through the scrubber, PM10 emission rates at the stack shall not exceed 0.030 lb PM10/MMBtu. [District Rule 2201]

22. Source testing to demonstrate compliance with PM10, SOx, NOx, and CO emission limits shall be conducted annually except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. Source testing to demonstrate compliance with PM10, SOx, NOx, and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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

26. 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

27. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

29. 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

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

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

32. The following test methods shall be used: 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, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

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

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

CONDITIONS CONTINUE ON NEXT PAGE

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

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

37. Permittee shall maintain records of fuel gas and TEOR gas sulfur content, higher heating value, annual consumption in MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit

38. Permittee shall comply with all notification and recordkeeping requirements of 40 CFR 60.7 a (1)(3) and (b). [District Rule 4001] Federally Enforceable Through Title V Permit

39. Fuel gas sulfur content shall be determined using ASTM D3246 or double GC for H2S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

40. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

41. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

42. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit

43. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, and 4306. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

45. When the scrubber is operating, the scrubber liquor pH shall be recorded every 15 minutes. [40 CFR part 64] Federally Enforceable Through Title V Permit

46. An excursion from the scrubber liquor pH level is defined as a daily pH reading of less than 6 or greater than 8. Upon detecting any excursion from the acceptable pH level, the permittee shall investigate the excursion and take corrective action to restore required pH level and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit

47. Records of scrubber pH monitoring equipment downtime, scrubber pH level excursions, and scrubber operation shall be maintained. [40 CFR part 64] Federally Enforceable Through Title V Permit

48. The scrubber pH sensor shall be calibrated annually. Calibration of the pH sensor shall be conducted by comparison of the sensor reading with a laboratory measurement of the scrubber recirculation fluid. [40 CFR part 64] Federally Enforceable Through Title V Permit

49. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

50. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit

51. If the District or EPA determine that a Quality improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit

52. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

53. This ATC shall be implemented concurrently with, or subsequently to S-1114-10-22. [District Rule 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1114-107-1 **EXPIRATION DATE:** 02/28/2011

EQUIPMENT DESCRIPTION:
77.6 MMBTU/HR TEOR/NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER SERVED BY SO2 SCRUBBER AND WET ESP LISTED IN S-1114-10

PERMIT UNIT REQUIREMENTS

1. This unit may be operated at the following locations: Sections 14 & 15, T31S, R22E and Section 24, T26S, R20E. When the unit is operated at Section 14, T31S, R22E or Section 24, T26S, R20E it may only be fired on natural gas with a sulfur content no greater than 1 gr/100 scf. [District Rule 4102]
2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]
3. Permittee shall install and maintain operational non-resettable, totalizing mass or volumetric flow meter(s) in the fuel (natural gas and TEOR gas) line(s) of the unit. Permittee shall determine the higher heating value (hhv) of the fuels (natural gas and TEOR gas) on a quarterly basis once per calendar quarter and whenever there is a change in the source of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Exhaust from unit shall be directed only to SO2 scrubber/wet ESP listed in S-1114-10 except when burning natural gas with a sulfur content no greater than 1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Scrubber/wet ESP shall be in operation when combusting TEOR gas except when burning natural gas with a sulfur content no greater than 1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rate of SOx from S-1114-10, '-74 and '-107 shall not exceed 264,490 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emission rate of SOx from S-1114-10, '-74 and '-107 shall not exceed 972.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 2201] Federally Enforceable Through Title V Permit
10. When any unit connected to scrubber/wet ESP is burning TEOR gas, scrubber/wet ESP shall be operating and permittee shall demonstrate compliance with PM10 and sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter unless no TEOR gas has been burned since the last scrubber performance source test. Sulfur removal efficiency of scrubber/wet ESP shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least quarterly. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. When unit is operated without scrubber/wet ESP, permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content within 60 days of initiating operation without scrubber. Analyses, as approved by the APCO, provided by the gas supplier may be used to satisfy this requirement. [District Rule 2201] Federally Enforceable Through Title V Permit

12. 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 Rule 2201] Federally Enforceable Through Title V Permit

13. When complying with PM10 and SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100 or ARB Methods 1-6. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit

14. At no time shall amount of TEOR gas introduced to this unit and all units connected to scrubber/wet ESP exceed the amount introduced during a source test demonstrating compliance with permit limits. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emissions rates shall not exceed any of the following: NOx (as NO2): 14 ppmv @ 3% O2 or 0.017 lb/MMBtu, SOx (as SO2) 0.324 lb/MMBtu or 224 ppmv @ 0% O2, PM10: 0.030 lb/MMBtu, CO: 42 ppmv @ 3% O2 or 0.031 lb/MMBtu, or VOC: 0.0055 lb/MMBtu or 13 ppmv @ 3% O2. [District Rules 2201, 4305, 4306 and 40 CFR 60.43c] Federally Enforceable Through Title V Permit

16. Source testing to demonstrate compliance with PM10, SOx, NOx, and CO emission limits shall be conducted within 60 days of initial start-up and annually thereafter except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. Source testing to demonstrate compliance with NOX and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. Source testing to demonstrate compliance with PM10 and SOx emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. If the unit is not burning TEOR gas, source testing to demonstrate compliance with PM10 and SOx emission limits may be delayed until 60 days after resuming burning TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit

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

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

22. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. 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

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

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

27. 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, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

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

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

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

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

32. Permittee shall maintain records of fuel gas and TEOR gas sulfur content, higher heating value, annual consumption in MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit

33. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

Appendix B

BACT Guideline

Back Details Page

Best Available Control Technology (BACT) Guideline 1.2.1
Last Update: 6/30/1999

> or = 5 MMBtu/Hr, Oil Field

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Natural gas, treated waste gas or recovered gas as a primary fuel. LPG as backup fuel.		
NOx	20.0 ppmvd @ 3% O2 (0.024 lb/MMBtu) - Natural gas, treated waste gas or recovered gas as a primary fuel. LPG as backup fuel. Low NOx burner system.	1. 9.0 ppmvd @ 3% O2 (0.0108 lb/MMBtu) Selective Catalytic Reduction system. 2. 14.0 ppmv @ 3% O2 (0.017 lb/MMBtu) Low NOx burner system.	
PM10	Natural gas, treated waste gas or recovered gas as a primary fuel. LPG as backup fuel.		
SOx	Natural gas, treated waste gas or recovered gas as a primary fuel. LPG as backup fuel.		
VOC	Natural gas, treated waste gas or recovered gas as a primary fuel. LPG as backup fuel.		

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is requried for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Details Page.

Back Details Page

Best Available Control Technology (BACT) Guideline 1.2.1
Last Update: 3/11/2005

Steam Generator (> or = 5 MMBtu/hr, Oil Field)

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	50 ppmvd @ 3% O2		
NOx	14 ppmvd @ 3% O2	7 ppmvd @ 3% O2 with SCR 9 ppmvd @ 3% O2	
PM10	Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO2 at stack O2		
SOx	Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO2 at stack O2		
VOC	Gaseous fuel		

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is requried for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Details Page.

Appendix C

BACT Analysis

Top Down BACT Analysis for the Steam Generators

Oxides of nitrogen (NO_X) are generated from the high temperature combustion of the natural gas fuel. A majority of the NO_X emissions are formed from the high temperature reaction of nitrogen and oxygen in the inlet air. The rest of the NO_X emissions are formed from the reaction of fuel-bound nitrogen with oxygen in the inlet air.

1. BACT Analysis for NO_X Emissions:

a. Step 1 - Identify all control technologies

The District adopted District Rule 4320 on October 16, 2008. The NO_X emission limit requirements in District Rule 4320 are lower than the current BACT limits; therefore a project specific BACT analysis will be performed to determine BACT for this project. District Rule 4320 includes a compliance option that limits oilfield steam generators with heat input ratings greater than 20 MMBtu/hr to 7 ppm @ 3% O_2. This emission limit is Achieved in Practice control technology for the BACT analysis. District Rule 4320 also contains an enhanced schedule option that allows applicants additional time to meet the requirements of the rule. The enhanced schedule NO_X emission limit requirement is 5 ppmv @ 3% O_2. Since this is an enhanced option in the rule, it will be considered the Technologically Feasible control technology for the BACT analysis.

The SJVUAPCD BACT Clearinghouse guideline 1.2.1 has been rescinded. Therefore a new BACT analysis is required. The following are possible control technologies:

1) 5 ppmvd @ 3% O_2 with SCR
2) 7 ppmvd @ 3% O_2

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1) 5 ppmvd @ 3% O_2 with SCR
2) 7 ppmvd @ 3% O_2

d. Step 4 - Cost Effectiveness Analysis

A cost effective analysis is required for technologically feasible control options that are not proposed. The applicant is proposing a NO_X limit of 7 ppmvd @ 3% O_2; therefore, a cost effective analysis is required for the 5 ppmvd option (SCR).

2. BACT Analysis for SO_X Emissions:

Oxides of sulfur (SO_X) emissions occur from the combustion of the sulfur, which is present in the fuel.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1st quarter 2005, identifies for achieved in practice BACT for SO_X emissions from oil field steam generators ≥5 MMBtu/hr as follows:

1) Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO_2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO_2 at stack O_2

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1) Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO_2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO_2 at stack O_2

d. Step 4 - Cost Effectiveness Analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for SO_X emissions from this oil field steam generator is natural gas fuel with a sulfur content ≤1 gr-S/100 scf. The applicant has proposed to install an oil field steam generator fired on natural gas with a sulfur content ≤1 gr-S/100 scf; therefore BACT for SO_X emissions is satisfied.

3. BACT Analysis for PM_{10} Emissions:

Particulate matter (PM_{10}) emissions result from the incomplete combustion of various elements in the fuel.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1st quarter 2005, identifies for achieved in practice BACT for CO_{10} emissions from oil field steam generators ≥5 MMBtu/hr as follows:

1) Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO_2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO_2 at stack O_2

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1) Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO_2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO_2 at stack O_2

d. Step 4 - Cost Effectiveness Analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for PM_{10} emissions from this oil field steam generator is natural gas fuel with a sulfur content ≤1 gr-S/100 scf. The applicant has proposed to install an oil field steam generator fired on natural gas with a sulfur content ≤1 gr-S/100 scf; therefore BACT for PM_{10} emissions is satisfied.

4. BACT Analysis for CO Emissions:

Carbon monoxide (CO) emissions are generated from the incomplete combustion of air and fuel.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1st quarter 2005, identifies for achieved in practice BACT for CO emissions from oil field steam generators ≥5 MMBtu/hr as follows:

1) 50 ppmvd @ 3% O_2

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1) 50 ppmvd @ 3% O_2

d. Step 4 - Cost Effectiveness Analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for CO emissions from this oil field steam generator is a CO limit of 50 ppmvd @ 3% O_2. The applicant has proposed to install an oil field steam generator with a CO limit of 50 ppmvd @ 3% O_2; therefore BACT for CO emissions is satisfied.

5. BACT Analysis for VOC Emissions:

Volatile organic compounds (VOC) emissions are generated from the incomplete combustion of the fuel.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1st quarter 2005, identifies for achieved in practice BACT for VOC emissions from oil field steam generators ≥5 MMBtu/hr as follows:

1) Gaseous fuel

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1) Gaseous fuel

d. Step 4 - Cost effectiveness analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for VOC emissions from this oil field steam generator is gaseous fuel. The applicant has proposed to install an oil field steam generator fired on gaseous fuel; therefore BACT for PM_{10} emissions is satisfied.

SCR Cost Effectiveness Analysis

Assumptions:

- Industry standard (IS) assumed to be a NO_X emission rate of 15 ppmv @ 3% O_2 in accordance with District Rule 4306.
- Unit's maximum emissions are defined by the burner size multiplied by the emissions factor and a maximum annual operating schedule of 8,760 hr/year.
- All annual emissions (included in the SLC) will be considered to be produced from each proposed generator (most conservative)

Calculations:

Industrial Standard NO_X Emissions = 77.6 MMBtu/hr x 0.018 lb/MMBtu x 8760 hrs/year
= 12,236 lb/year

Tech. Feasible NO_X Emissions = 77.6 MMBtu/hr x 0.006 lb/MMBtu x 8760 hrs/year
= 4,079 lb/year

Selective Catalytic Reduction system (Detailed costs follow the BACT Analysis Section):

Capital Cost (SCR Vendor & TJ Cross, provided for project S-1084509): **$1,102,046** (includes all purchased equipment, taxes, freight, and installation of SCR for a 62.5 MMBtu/hr unit) – detailed costs follow.

Total Estimated Capital Cost: **$1,102,046**

Equivalent Annual Capital Cost (Capital Recovery)

$$A = P \frac{i(1+i)^n}{(1+i)^n - 1}$$ where;

A = Equivalent Annual Control Equipment Capital Cost
P = Present value of the control equipment, including installation cost
i = interest rate (use 10%, or demonstrate why alternate is more representative of the specific operation).
n = equipment life (assume 10 years or demonstrate why alternate is more representative of the specific operation)

Where

P = $1,102,046
i = 10%,
n = 10 years

A = $179,303

Because the capital recovery and annual costs of ammonia, catalyst replacement, and energy ($179,303/yr + $35,583/yr + $10,512/yr = $225,398) correspond to a 62.5 MMBtu/hr unit they are adjusted using the "6/10" rule as follows:

$225,398 x $(77.6/62.5)^{0.6}$ = $256,649/yr
Operation and Maintenance Labor = $7,875/yr + $1,181/yr
Indirect annual costs = $2 x 13,120 + 4725
= $30,965
Total annualized cost = <u>$296,670/yr</u>

<u>NOx Reduction due to Selective Catalytic Reduction system:</u>

Total reduction = $Emissions_{15\ ppm}$ – $Emissions_{5\ ppm}$
Total reduction = 12,236 lb/year– 4,079 lb/year
Total reduction = 8,157 lb/year = 4.08 ton NO_X per year

<u>Cost effectiveness:</u>

Cost effectiveness = $296,670/ 4.08 tpy
Cost effectiveness = $72,713/ ton

The cost effectiveness is greater than the $24,500/ton cost effectiveness threshold of the District BACT policy. Therefore the use of SCR with ammonia injection is not cost effective and is not required as BACT.

e. Step 5 - Select BACT

BACT for NO_X emissions from this oil field steam generator is a NO_X limit of 7 ppmvd @ 3% O_2. The applicant has proposed to install an oil field steam generator with a NO_X limit of 7 ppmvd @ 3% O_2; therefore BACT for NO_X emissions is satisfied.

Appendix D

SSPE1 Tabulation

SSPE1

Permit Unit				NOx	SOx	PM10	CO	VOC	Note
S	1114	9	15	3,195	88	438	7,325	263	
S	1114	10	24	9,198	165,485	36,434	15,841	1,533	
S	1114	15	15	2,013	110	552	9,230	331	
S	1114	16	18	9,855	1,560	4,161	16,973	3,011	
S	1114	18	15	3,195	88	438	7,326	263	
S	1114	19	15	8,322	0	438	7,373	256	
S	1114	20	12	9,855	1,560	2,738	20,258	1,643	
S	1114	28	3	0	0	0	0	2,107	*
S	1114	29	3	0	0	0	0	1,211	*
S	1114	36	3	0	0	0	0	809	*
S	1114	54	6	0	0	0	0	219	
S	1114	58	5	0	0	0	0	219	
S	1114	59	5	0	0	0	0	219	
S	1114	60	5	0	0	0	0	219	
S	1114	66	16	0	0	0	0	90,212	
S	1114	72	4	0	0	0	0	511	
S	1114	73	4	7,258	308,787	2,156	39,492	3,255	
S	1114	74	9	19,710	177,390	19,710	11,498	1,643	
S	1114	78	3	0	0	0	0	0	
S	1114	79	2	0	0	0	0	0	
S	1114	80	2	0	0	0	0	0	
S	1114	81	2	0	0	0	0	0	
S	1114	82	2	0	0	0	0	0	
S	1114	83	7	1,971	73	806	19,601	548	
S	1114	84	8	1,971	73	806	19,601	548	
S	1114	85	2	0	0	0	0	0	
S	1114	86	2	0	0	0	0	0	
S	1114	87	2	0	0	0	0	0	
S	1114	91	2	3,504	105	266	2,943	193	*
S	1114	100	2	0	0	0	0	1,060	
S	1114	101	2	0	0	0	0	223	
S	1114	103	4	2,077	110	248	20,247	858	
S	1114	104	2	0	0	0	0	0	
S	1114	105	2	0	0	0	0	0	
S	1114	106	1	0	0	0	0	194	
S	1114	107	1	11,556	88,163	20,393	21,073	3,739	
S	1114	109	0	0	0	0	0	548	
S	1114	110	0	0	0	0	0	548	
S	1114	112	0	0	0	0	0	100	
S	3755	6	1	0	0	0	0	0	
S	3755	7	0	0	0	0	0	1,570	
S	3755	8	0	0	0	0	0	1,570	
S	3755	9	0	0	0	0	0	1,570	
S	3755	10	4	4,840	9,308	569	26,335	4,484	
S	3755	11	3	3,154	0	2,044	19,929	1,497	
S	3755	12	10	0	0	0	0	6,680	
S	3755	16	0	0	0	0	0	943	
S	3755	19	1	3,723	11,388	1,664	16,206	1,205	
Total				**105,397**	**597,740**	**93,861**	**281,251**	**136,002**	

*These values were taken from Project S-1032306

**Total Sulfur includes SLC from units S-1114-10, '-74, and '-107 of 264,490 lb/yr

Appendix E

SSPE2 Tabulation

SSPE2

Permit Unit				NOx	SOx	PM10	CO	VOC	Note
S	1114	9	15	3,195	88	438	7,325	263	
S	1114	10	24	9,198	165,485	36,434	15,841	1,533	
S	1114	15	15	2,013	110	552	9,230	331	
S	1114	16	18	9,855	1,560	4,161	16,973	3,011	
S	1114	18	15	3,195	88	438	7,326	263	
S	1114	19	15	8,322	0	438	7,373	256	
S	1114	20	12	9,855	1,560	2,738	20,258	1,643	
S	1114	28	3	0	0	0	0	2,107	*
S	1114	29	3	0	0	0	0	1,211	*
S	1114	36	3	0	0	0	0	809	*
S	1114	54	6	0	0	0	0	219	
S	1114	58	5	0	0	0	0	219	
S	1114	59	5	0	0	0	0	219	
S	1114	60	5	0	0	0	0	219	
S	1114	66	16	0	0	0	0	90,212	
S	1114	72	4	0	0	0	0	511	
S	1114	73	4	7,258	308,787	2,156	39,492	3,255	
S	1114	74	9	19,710	486	19,710	11,498	1,643	
S	1114	78	3	0	0	0	0	0	
S	1114	79	2	0	0	0	0	0	
S	1114	80	2	0	0	0	0	0	
S	1114	81	2	0	0	0	0	0	
S	1114	82	2	0	0	0	0	0	
S	1114	83	7	1,971	73	806	19,601	548	
S	1114	84	8	1,971	73	806	19,601	548	
S	1114	85	2	0	0	0	0	0	
S	1114	86	2	0	0	0	0	0	
S	1114	87	2	0	0	0	0	0	
S	1114	91	2	3,504	105	266	2,943	193	*
S	1114	100	2	0	0	0	0	1,060	
S	1114	101	2	0	0	0	0	223	
S	1114	103	4	2,077	110	248	20,247	858	
S	1114	104	2	0	0	0	0	0	
S	1114	105	2	0	0	0	0	0	
S	1114	106	1	0	0	0	0	194	
S	1114	107	2	5,438	1937	5,166	21,073	3,739	
S	1114	109	0	0	0	0	0	548	
S	1114	110	0	0	0	0	0	548	
S	1114	112	0	0	0	0	0	100	
S	1114	114	0	0	0	0	0	0	
S	1114	115	0	0	0	0	0	0	
S	3755	6	1	0	0	0	0	0	
S	3755	7	0	0	0	0	0	1,570	
S	3755	8	0	0	0	0	0	1,570	
S	3755	9	0	0	0	0	0	1,570	
S	3755	10	4	4,840	9,308	569	26,335	4,484	
S	3755	11	3	3,154	0	2,044	19,929	1,497	
S	3755	12	10	0	0	0	0	6,680	
S	3755	16	0	0	0	0	0	943	
S	3755	19	1	3,723	11,388	1,664	16,206	1,205	
Total				**99,279**	**597,740**	**78,634**	**281,251**	**136,002**	

*These values were taken from Project S-1032306

**Total Sulfur includes SLC from units S-1114-10 and '-74 of 262,553 lb/yr

Appendix F

TVFORM-009

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

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

COMPANY NAME: Seneca Resources	FACILITY ID: S-1114
1. Type of Organization: [X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name:	
3. Agent to the Owner:	

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

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

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

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

(PKD) 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:

Paul K. Duncan — Signature of Responsible Official

7/19/2010 — Date

Paul K. Duncan

Name of Responsible Official (please print)

Manager Operations – West

Title of Responsible Official (please print)

Appendix G

HRA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Kris Rickards – Permit Services
From:	Ester Davila – Technical Services
Date:	June 11, 2010
Facility Name:	Seneca Resources
Location:	Heavy Oil Western
Application #(s):	S-1114-114-0 & 115-0
Project #:	S-1100733

A. RMR SUMMARY

RMR Summary			
Categories	**Natural Gas Steam Generators (Units 114-0 &115-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	0.07	0.07	>1.0
Acute Hazard Index	0.02	0.02	0.09
Chronic Hazard Index	0.00	0.00	0.00
Maximum Individual Cancer Risk	**1.01E-6 (each)**	2.02E-6	3.19E-06
T-BACT Required?	**Yes**		
Special Permit Conditions?	**No**		

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 114-0 & 115-0

1. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102] N

T-BACT is required for these units because of emissions of PAHs, which are VOC. In accordance with District policy, BACT for this unit will be considered to be T-BACT.

B. RMR REPORT

I. Project Description

Technical Services received a request on June 7, 2010, to perform a Risk Management Review for two new steam generators burning natural gas. These steam generators are being added to an existing steam generator (Unit 107), which will share daily and annual SLC emission limits.

II. Analysis

Technical Services performed a prioritization using the District's HEARTs database. The project's prioritization score was less than one; however the facility total prioritization score is greater than one, therefore a refined health risk assessment was required and performed. Toxic emissions from the steam generators were calculated using the Ventura County emission factors for the external combustion of natural gas. AERMOD was used, with point source parameters outlined below, and the concatenated meteorological data from 2005 to 2008 for Bakersfield to determine maximum dispersion factors at the nearest residential and business receptors. These dispersion factors were input into the HARP model to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Units 114-0 & 115-0			
Source Type	Point	**Location Type**	Rural
Stack Height (m)	6.4	**Closest Receptor (m)**	305
Stack Diameter (m)	0.91	**Stack Gas Velocity (m/s)**	15.09
Stack Gas Temp. (K)	341		

III. Conclusion

RMR

The acute and chronic indices are below 1.0; and the maximum individual cancer risk associated with this project is **2.01E-06**, which is greater than 1 in a million but less than the 10 in a million limit. In accordance with the District's Risk Management Policy, the project is approved **with** Toxic Best Available Control Technology (T-BACT) for VOCs.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

Appendix H

Manufacturer Guarantee

CONSTRUCTION LEADERS

May 10, 2010

Seneca Resources
2131 Mars Court
Bakersfield, CA 93308

Attention: Tim Alburger / HSE Manager Seneca Resources

Reference: Horizontal Style Convection Box Retrofit of M&M Steam Generator
Permit #: S-1114-107

Tim,

The new convection box PCL will install on your M&M steam generator will have 18,560 square feet of bare tube surface area.

If you need additional information regarding this letter, please let me know.

Thank you,

Mark Pittser

Mark Pittser
PCL Industrial Services, Inc.
(661) 343-2789 cell
(661) 835-4440 Office

4520 Stine Rd., Suite 7
Bakersfield, CA 93313
Contractors Lic. 662541
Phone 661 • 833 • 1902
Fax 661 • 833 • 4008

May 26, 2010

Seneca Resources
Attn: Keith Jones
2131 Mars Court
Bakersfield, CA 93308
TEL: 1-661-768-4384
FAX: 1-661-768-4995
EMAIL: jonesk@srcx.com

REFERENCE: Variable Frequency Drives

Dear Mr. Jones:

The purpose of this letter is to inform you that the new 85 MMBTU/HR steam generator combustion control system Esys will be proposing will include Danfoss FC302 model variable frequency drives (VFDs) for your combustion blower and feedwater pump. **A premium efficiency motor for the combustion blower** will also be included.

Thank you for your interest in our services. If you have any questions, or if we can be of further assistance, please feel free to give us a call.

Sincerely,

Fabio Russoniello
General Manager

Appendix I

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1114-10-25 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: SENECA RESOURCES
MAILING ADDRESS: 2131 MARS COURT
BAKERSFIELD, CA 93308-6830

LOCATION: HEAVY OIL WESTERN
CA

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STRUTHERS STEAM GENERATOR WITH LOW NOX BURNER AND O2 CONTROLLER SERVED BY AIRPOL DUAL VALVE TRAY SOX SCRUBBER WITH CHEVRON TYPE MIST ELIMINATOR AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH S-1114-10, '-74: REMOVE UNIT '-107 FROM SLC CONDITION

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] 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. This ATC shall be implemented concurrently with S-1114-74-10 and '-107-2. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Total fuel consumption, including TEOR gas, shall not exceed 511,000 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall install and maintain operational non-resettable, totalizing mass or volumetric flow meter(s) in the fuel (natural gas and TEOR gas) line(s) of the unit. Permittee shall determine the higher heating value (hhv) of the fuels (natural gas and TEOR gas) on a quarterly basis once per calendar quarter and whenever there is a change in the source of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-1114-10-25 : Aug 25 2010 8:09AM -- RICKARDK : Joint Inspection NOT Required

6. Exhaust from unit shall be directed only to SO2 scrubber/wet ESP authorized herein except when burning PUC regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Scrubber/wet ESP shall be in operation when combusting TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Emission rate of SOx from S-1114-10 and '-74 shall not exceed 262,553 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic, including sodium hydroxide and sodium carbonate. Other caustics may be used upon written District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Scrubber liquor pH shall be maintained between 6 and 8, and shall be continuously monitored. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Scrubber mist eliminator shall be properly cleaned and maintained. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than 8.0 gpm/1000 acfm. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 2201] Federally Enforceable Through Title V Permit

15. When any unit connected to scrubber/wet ESP is burning TEOR gas, scrubber/wet ESP shall be operating and permittee shall demonstrate compliance with PM10 and sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter unless no TEOR gas has been burned since the last scrubber performance source test. Sulfur removal efficiency of scrubber/wet ESP shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least quarterly. [District NSR Rule 2201] Federally Enforceable Through Title V Permit

16. When unit is operated without scrubber/wet ESP, permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content within 60 days of initiating operation without scrubber. Analyses, as approved by the APCO, provided by the gas supplier may be used to satisfy this requirement. [District Rule 2201] Federally Enforceable Through Title V Permit

17. When complying with PM10 and SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100 or ARB Methods 1-6. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit

18. At no time shall amount of TEOR gas introduced to this unit and all units connected to scrubber/wet ESP exceed the amount introduced during a source test demonstrating compliance with permit limits. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Emissions rates shall not exceed any of the following: NOx (as NO2): 15 ppmv @ 3% O2 or 0.018 lb/MMBtu, SOx (as SO2) 0.324 lb/MMBtu or 224 ppmv @ 0% O2, PM10: 0.0713 lb/MMBtu except as provided below, CO: 42 ppmv @ 3% O2 or 0.031 lb/MMBtu, or VOC: 0.0055 lb/MMBtu or 13 ppmv @ 3% O2. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

20. Source testing to demonstrate compliance with PM10, SOx, NOx, and CO emission limits shall be conducted annually except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

21. Source testing to demonstrate compliance with PM10, SOx, NOx, and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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

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

25. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

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

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

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

30. The following test methods shall be used: 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, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

31. 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

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

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CONDITIONS CONTINUE ON NEXT PAGE

33. 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

34. 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

35. Permittee shall maintain records of fuel gas and TEOR gas sulfur content, higher heating value, annual consumption in MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit

36. Permittee shall comply with all notification and recordkeeping requirements of 40 CFR 60.7 a (1)(3) and (b). [District Rule 4001] Federally Enforceable Through Title V Permit

37. Fuel gas sulfur content shall be determined using ASTM D3246 or double GC for H2S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

39. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

40. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] 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 1070, 1081, 4201, 4301, 4305, and 4306. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. When the scrubber is operating, the scrubber liquor pH shall be recorded every 15 minutes. [40 CFR part 64] Federally Enforceable Through Title V Permit

44. An excursion from the scrubber liquor pH level is defined as a daily pH reading of less than 6 or greater than 8. Upon detecting any excursion from the acceptable pH level, the permittee shall investigate the excursion and take corrective action to restore required pH level and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit

45. Records of scrubber pH monitoring equipment downtime, scrubber pH level excursions, and scrubber operation shall be maintained. [40 CFR part 64] Federally Enforceable Through Title V Permit

46. The scrubber pH sensor shall be calibrated annually. Calibration of the pH sensor shall be conducted by comparison of the sensor reading with a laboratory measurement of the scrubber recirculation fluid. [40 CFR part 64] Federally Enforceable Through Title V Permit

47. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

48. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit

49. If the District or EPA determine that a Quality improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit

50. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1114-74-10

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: SENECA RESOURCES
MAILING ADDRESS: 2131 MARS COURT
BAKERSFIELD, CA 93308-6830

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (CUSA ID # 50-1-15A, DIS# 43005-78) WITH O2 CONTROLLER SERVED BY SO2 SCRUBBER LISTED IN S-1114-10: REMOVE UNIT '-107 FROM SLC CONDITION

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] 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. This ATC shall be implemented concurrently with S-1114-10-25 and '-107-2. [District Rule 2201] Federally Enforceable Through Title V Permit
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Generator is authorized to operate at the following locations: SE15, T31S/R22E and NE24, T26W/R20E. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made in writing no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director/APCO

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DAVID WARNER, Director of Permit Services
S-1114-74-10 : Aug 25 2010 8:09AM -- RICKARDK : Joint Inspection NOT Required

7. When operating at SE15, T31S/R22E, scrubber/wet ESP shall be used when burning TEOR gas. TEOR gas firing is not authorized when steam generator operates at NE24, T26W/R20E. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator firebox convection section, scrubber/wet ESP bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Emission rate of SOx from S-1114-10 and '-74 shall not exceed 262,553 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: NOx: 0.018 lb/MMBtu or 15 ppmv @ 3% O2, PM10: 0.0713 lb/MMBtu except as provided below, SOx (as SO2): 0.324 lb/MMBtu or 224 ppmv @ 0% O2, VOC: 0.0055 lb/MMBtu or 13 ppmv @ 3% O2, or CO: 29 ppmv at 3% O2 or 0.021 lb/MMBtu. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

11. At no time shall TEOR gas introduced to this unit and all units connected to scrubber/wet ESP exceed the amount introduced during a source test demonstrating compliance with permit limits. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

13. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

14. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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

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

17. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

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

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

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

22. 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, sulfur oxides - ARB Methods 1-6 or EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] 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. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of 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

27. Permittee shall maintain records of fuel gas and TEOR gas sulfur contents and annual consumption of each. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Fuel gas sulfur content shall be determined using ASTM D3246 or double GC for H2S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. {450} Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

30. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

31. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit

32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, and 4306. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

34. When the scrubber is operating, the scrubber liquor pH shall be recorded every 15 minutes. [40 CFR part 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

35. An excursion from the scrubber liquor pH level is defined as a daily pH reading of less than 6 or greater than 8. Upon detecting any excursion from the acceptable pH level, the permittee shall investigate the excursion and take corrective action to restore required pH level and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit

36. Records of scrubber pH monitoring equipment downtime, scrubber pH level excursions, and scrubber operation shall be maintained. [40 CFR part 64] Federally Enforceable Through Title V Permit

37. The scrubber pH sensor shall be calibrated annually. Calibration of the pH sensor shall be conducted by comparison of the sensor reading with a laboratory measurement of the scrubber recirculation fluid. [40 CFR part 64] Federally Enforceable Through Title V Permit

38. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit

39. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit

40. If the District or EPA determine that a Quality improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit

41. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1114-107-2

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: SENECA RESOURCES
MAILING ADDRESS: 2131 MARS COURT
BAKERSFIELD, CA 93308-6830

LOCATION: HEAVY OIL WESTERN
CA

EQUIPMENT DESCRIPTION:
MODIFICATION OF 77.6 MMBTU/HR TEOR/NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER SERVED BY SO2 SCRUBBER AND WET ESP LISTED IN S-1114-10: REMOVE TEOR GAS FIRING, LOWER NOX TO 7 PPMV AND LIMIT FUEL GAS SULFUR CONTENT FOR RULE 4320, AND INCLUDE WITH UNITS '-114 AND '-115 IN SPECIFIC LIMITING CONDITION FOR NOX, SOX, PM10, CO, AND VOC

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] 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. This unit may be operated at the following locations: Sections 14 & 15, T31S, R22E, Sections 18, 19, and 20, T11N, R23W, and Section 24, T26S, R20E. [District Rule 4102]
4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]
5. Permittee shall determine the higher heating value (hhv) of the fuel at least once per year. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services

S-1114-107-2 : Aug 25 2010 8:09AM – RICKARDK : Joint Inspection NOT Required

6. 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 Rule 2201] Federally Enforceable Through Title V Permit

7. Emissions rates shall not exceed any of the following: NOx (as NO2): 7 ppmv @ 3% O2 or 0.008 lb/MMBtu, SOx (as SO2) 0.00285 lb/MMBtu, PM10: 0.0076 lb/MMBtu, CO: 42 ppmv @ 3% O2 or 0.031 lb/MMBtu, or VOC: 0.0055 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

8. Combined maximum emissions from steam generators S-1114-107, '-114, and '-115 shall not exceed any of the following limits: 5,438 lb-NOx/yr, 1,937 lb-SOx/yr, 5,166 lb-PM10/yr, 21,073 lb-CO/yr, and 3,739 lb-VOC/yr. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

9. Maximum annual fuel consumption in steam generators S-1114-107, '-114, and '-115 shall not exceed 679,776 MMBtu/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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

12. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

13. 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

14. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

15. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

16. 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

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

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

19. 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, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

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

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of fuel gas sulfur content and higher heating value. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Permittee shall maintain annual records of combined fuel use (in MMBtu/year) for steam generators S-1114-107, '-114, and '-115. [District Rule 2201] Federally Enforceable Through Title V Permit

26. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1114-114-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: SENECA RESOURCES
MAILING ADDRESS: 2131 MARS COURT
BAKERSFIELD, CA 93308-6830

LOCATION: HEAVY OIL WESTERN
CA

EQUIPMENT DESCRIPTION:
77.6 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] 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. Authority to Construct (ATC) S-1114-107-2 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]
4. This unit may be operated at the following locations: Sections 14 & 15, T31S, R22E, Sections 18, 19, and 20, T11N, R23W, and Section 24, T26S, R20E. [District Rule 4102]
5. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]
6. This unit shall be equipped with horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input and variable frequency drive high efficiency electrical motors driving the blower and water pump. Documentation showing this unit is so equipped shall be retained on site. [CEQA]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director/APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-1114-114-0 : Aug 25 2010 8:10AM – RICKARDK : Joint Inspection NOT Required

7. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

8. Permittee shall determine the higher heating value (hhv) of the fuel at least once per year. [District Rule 2201] Federally Enforceable Through Title V Permit

9. 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 Rule 2201] Federally Enforceable Through Title V Permit

10. Emissions rates shall not exceed any of the following: NOx (as NO2): 7 ppmv @ 3% O2 or 0.008 lb/MMBtu, SOx (as SO2) 0.00285 lb/MMBtu, PM10: 0.0076 lb/MMBtu, CO: 42 ppmv @ 3% O2 or 0.031 lb/MMBtu, or VOC: 0.0055 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

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26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of fuel gas sulfur content and higher heating value. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain annual records of combined fuel use (in MMBtu/year) for steam generators S-1114-107, '-114, and '-115. [District Rule 2201] Federally Enforceable Through Title V Permit

29. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review
(Revise Permit Conditions On Permits)

Facility Name:	Chevron USA, Inc	Date:	August 24, 2010
Mailing Address:	P. O. Box 1392	Engineer:	Sudeshna Bakshi
	Bakersfield, CA 93302	Lead Engineer:	Stephen P Leonard

Contact Person: Martin Lundy / Sharon Walker
Telephone: (661) 654-7142 / (661) 654-7487
Fax: (661) 654-7004

Application #(s): S-1423-1-4, S-1423-2-5, S-1423-3-4, and S-1423-10-2
Project #: S-1103838
Deemed Complete: August 5, 2010

I. Proposal

Chevron USA, Inc has requested Authority to Construct permits for revision of existing permit conditions for four permit units to conform with Rule 4623 voluntary tank inspection, maintenance and cleaning program.

The four existing fixed roof storage tanks are currently permitted as S-1423-1-3, S-1423-2-4, S-1423-3-3, and S-1423-10-1 (see Appendix A). The applicant has requested that gas leak detection permit conditions 6, 4, 4, and 8, in the respective permits be revised as explained in Section VIII (Rule 4623 discussion) later.

This facility is not a major source for any pollutants. And, as demonstrated in Section VIII, the proposed modification does not constitute an NSR modification to existing units S-1423-1, S-1423-2, S-1423-3, and S-1423-10. Therefore, this project is <u>not</u> subject to District Rule 2201 and no emission calculations will be performed at this time.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (12/18/08)
Rule 2010	Permits Required Rule (12/17/1992)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4623	Storage of Organic Liquids (5/19/05)
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 facility is in the North Midway Sunset Oilfield. The proposed permit changes in this application are for four permit units located in the SE ¼ of Section 31, Township 31S, Range 23E in the County of Kern, CA. 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

Light and heavy oil are blended in the tanks and mixed with other lighter components, such as natural gasoline. Tank units have steam heating coils installed to heat the oil stored in the tank to decrease its viscosity and make it easier to pump and ship by pipeline. Each tank is served by an existing tank vapor control system.

V. Equipment Listing

Pre-Project Equipment Description:

S1423-1-3: 840,000 GALLON FIXED ROOF CRUDE OIL STORAGE TANK WITH ONE HEATING COIL SERVED BY A TANK VAPOR CONTROL SYSTEM

S-1423-2-4: 420,000 GALLON FIXED ROOF CRUDE OIL STORAGE TANK WITH ONE HEATING COIL SERVED BY A TANK VAPOR CONTROL SYSTEM SHARED WITH S-1423-1 AND S-1423-3

S-1423-3-3: 420,000 GALLON CRUDE OIL STORAGE TANK WITH ONE HEATING COIL SERVED BY TANK VAPOR CONTROL SYSTEM SHARED WITH S-1423-1 AND S-1423-2

S-1423-10-1: 42,000 GALLON FIXED ROOF CRUDE OIL STORAGE TANK #T4 SERVED BY A TANK VAPOR CONTROL SYSTEM

Proposed Modification:

S1423-1-4: MODIFICATION OF 20,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH ONE HEATING COIL SERVED BY A TANK VAPOR CONTROL SYSTEM: REVISE PERMIT CONDITION# 6

S-1423-2-5: MODIFICATION OF 10,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH ONE HEATING COIL SERVED BY A TANK VAPOR CONTROL SYSTEM SHARED WITH S-1423-1 AND S-1423-3: REVISE PERMIT CONDITION# 4

S-1423-3-4: MODIFICATION OF 10,000 BBL CRUDE OIL STORAGE TANK WITH ONE HEATING COIL SERVED BY TANK VAPOR CONTROL SYSTEM SHARED WITH S-1423-1 AND S-1423-2: REVISE PERMIT CONDITION# 4

S-1423-10-2: MODIFICATION OF 1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK #T4 SERVED BY A TANK VAPOR CONTROL SYSTEM: REVISE PERMIT CONDITION# 8

Post-Project Equipment Description:

S1423-1-4: 20,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH ONE HEATING COIL SERVED BY A TANK VAPOR CONTROL SYSTEM

S-1423-2-5: 10,000 BBL GALLON FIXED ROOF CRUDE OIL STORAGE TANK WITH ONE HEATING COIL SERVED BY A TANK VAPOR CONTROL SYSTEM SHARED WITH S-1423-1 AND S-1423-3

S-1423-3-4: 10,000 BBL CRUDE OIL STORAGE TANK WITH ONE HEATING COIL SERVED BY TANK VAPOR CONTROL SYSTEM SHARED WITH S-1423-1 AND S-1423-2

S-1423-10-2: 1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK #T4 SERVED BY A TANK VAPOR CONTROL SYSTEM

VI. Emission Control Technology Evaluation

There are no changes in control methods proposed by the applicant. The emission control device is described in the engineering evaluation for project number S-1000997. No further discussion is necessary.

VII. General Calculations

This project does not meet the criteria for a Rule 2201 Modification, as defined in Section 3.26, and is not subject to the requirements of Rule 2201. Therefore, formal calculations for Rule 2201 are not necessary and no further discussion is required.

VIII. Compliance

Rule 2010 Permits Required

Permits are required for this operation per Section 2.0 which states that a permit is required for operation, construction, alteration, or replacement of any source operation "which may emit air contaminants or may reduce the emission of air contaminants." The revision of permit condition in the Permits to Operate required Authority to Construct applications in order for the District to re-open the current Permits to Operate and incorporate the revised permit condition. The application satisfies the requirements of this rule.

Rule 2201 New and Modified Stationary Source Review Rule

As noted in Section VII of this engineering evaluation, the proposed modification does not constitute an NSR modification; Pursuant to section 3.26 of District Rule 2201, a modification is defined as:

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

The permit modification consists of revising the permit conditions to conform to Rule 4623 voluntary tank inspection, maintenance and cleaning program. Therefore, the proposed modification does not result in a change in the hour of operation, production rate or method of operation which necessitates a change in permit conditions.

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

The proposed modification does not constitute a structural change or addition to an existing emissions unit which necessitates a change in permit conditions.

3.26.1.3 An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.

The proposed modification does not result in an increase in emissions from any emissions unit.

3.26.1.4 Addition of any new emissions unit which is subject to District permitting requirements.

The proposed modification does not result in the addition of any new emissions units.

3.26.1.5 A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

The proposed modification does not necessitate any change to permit conditions or description.

As discussed above, the modification proposed to permit condition for existing units S-1423-1-4, S-1423-2-5, S-1423-3-4, and S-1423-10-21 does not meet any of the criteria for a modification. Therefore, it is not subject to the requirements of District Rule 2201.

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1114-115-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: SENECA RESOURCES
MAILING ADDRESS: 2131 MARS COURT
BAKERSFIELD, CA 93308-6830

LOCATION: HEAVY OIL WESTERN
CA

EQUIPMENT DESCRIPTION:
77.6 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] 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. Authority to Construct (ATC) S-1114-107-2 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]
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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-1114-115-0 : Aug 25 2010 8:10AM – RICKAROK : Joint Inspection NOT Required

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8. Permittee shall determine the higher heating value (hhv) of the fuel at least once per year. [District Rule 2201] Federally Enforceable Through Title V Permit

9. 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 Rule 2201] Federally Enforceable Through Title V Permit

10. Emissions rates shall not exceed any of the following: NOx (as NO2): 7 ppmv @ 3% O2 or 0.008 lb/MMBtu, SOx (as SO2) 0.00285 lb/MMBtu, PM10: 0.0076 lb/MMBtu, CO: 42 ppmv @ 3% O2 or 0.031 lb/MMBtu, or VOC: 0.0055 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

11. Combined maximum emissions from steam generators S-1114-107, '-114, and '-115 shall not exceed any of the following limits: 5,438 lb-NOx/yr, 1,937 lb-SOx/yr, 5,166 lb-PM10/yr, 21,073 lb-CO/yr, and 3,739 lb-VOC/yr. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Maximum annual fuel consumption in steam generators S-1114-107, '-114, and '-115 shall not exceed 679,776 MMBtu/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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

15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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

17. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

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

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

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

22. 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, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] 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, 4306, and 4320] Federally Enforceable Through Title V Permit

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of fuel gas sulfur content and higher heating value. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain annual records of combined fuel use (in MMBtu/year) for steam generators S-1114-107, '-114, and '-115. [District Rule 2201] Federally Enforceable Through Title V Permit

29. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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