



JUL 03 2013

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

**Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)
District Facility # S-1114
Project # S-1124440**

Dear Mr. Alburger:

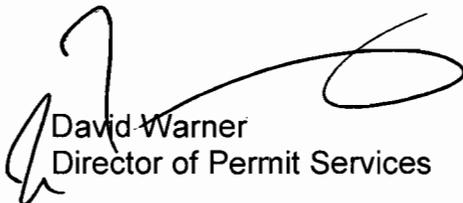
Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project proposal is to decrease the NOx emissions rate for three 62.5 MMBtu/hr steam generators from 12 ppmv @ 3% O₂ to 9 ppmv @ 3% O₂ in order to comply with the requirements of District Rule 4320.

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

If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,



David Warner
Director of Permit Services

Enclosures

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
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Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

II. APPLICABLE RULES

District Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
District Rule 2520 Federally Mandated Operating Permits (6/21/01)
District Rule 4001 New Source Performance Standards (4/14/99)
District Rule 4101 Visible Emissions (2/17/05)
District Rule 4102 Nuisance (12/17/92)
District Rule 4201 Particulate Matter Concentration (12/17/92)
District Rule 4301 Fuel Burning Equipment (12/17/92)
District Rule 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)
District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)
District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3 (3/17/05)
District Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater Than 5.0 MMBtu/hr (10/16/08)
District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)
District Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. PROJECT LOCATION:

The units are located within Seneca Resources' Heavy Oil Western stationary source (Midway-Sunset Field in Fellows, CA; North Lost Hills Field in Lost Hills, CA; Midway-Sunset Field in Maricopa, CA). The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

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:

C-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

C-1114-20-15: 62.5 MMBTU/HR STRUTHERS NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE BURNER, MULTIPLE LOCATIONS - M & M GENERATOR #5

C-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

ATC Equipment Description:

C-1114-10-29: 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-1114-74: LOWER NOX EMISSION LIMIT TO 9 PPMVD @ 3% O2 FOR DISTRICT RULE 4320 COMPLIANCE

C-1114-20-17: MODIFICATION OF 62.5 MMBTU/HR STRUTHERS NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE BURNER, MULTIPLE LOCATIONS - M & M GENERATOR #5: LOWER NOX EMISSION LIMIT TO 9 PPMVD @ 3% O2 FOR DISTRICT RULE 4320 COMPLIANCE

C-1114-74-14: MODIFICATION OF 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: LOWER NOX EMISSION LIMIT TO 9 PPMVD @ 3% O2 FOR DISTRICT RULE 4320 COMPLIANCE

Post-Project Equipment Description:

C-1114-10-29: 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--74

C-1114-20-17: 62.5 MMBTU/HR STRUTHERS NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE BURNER, MULTIPLE LOCATIONS - M & M GENERATOR #5

C-1114-74-14: 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

VI. EMISSION CONTROL TECHNOLOGY EVALUATION:

NO_x Control:

The units are equipped with ultra low-NO_x burners capable of achieving NO_x emissions of 9 ppmvd @ 3% O₂, and are fired on less than 50% by volume California Public Utility Commission (PUC) Quality Natural Gas.

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

Sulfur Control:

S-1114-10 and '-74

Combustion of TEOR gas in steam generators generally produces higher emissions of SO_x and PM₁₀ than from combustion of natural gas. This is reflected by higher SO_x and PM₁₀ emission limits for units S-1114-10 and '-74 (0.324 lb SO_x/MMBtu, PM₁₀ 0.0713 lb/MMBtu).

The existing SO₂ scrubber which currently serves steam generators S-1114-10 and -74 is equipped with a wet ESP. The SO_x control efficiency of the wet ESP is expected to be at least 95% (see project S-1114, 1093757).

S-1114-20

The steam generator is authorized to combust gas containing no more than 1.0 gr S/100scf.

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. However, calculations will be performed for emission profile purposes.

A. Assumptions

- The maximum operating schedule is 24 hours per day
- Unit -10 has a maximum fuel consumption limit of 511,000 MMBtu/yr (per current PTO)
- HHV of natural gas is 1000 MMBtu/MMscf (APR-1720).
- Oxygen-based F-Factor for Natural Gas @ 60 °F is 8,578 scf/MMBtu (40 CFR Part 60, App. A, Method 19).

B. Emission Factors

Pre-Project Emissions Factors (EF1):

S-1114-10-25:

Pollutant	Pre-Project Emission Factors (EF1)		Source
NO _x	0.0143 lb-NO _x /MMBtu	12 ppmvd NO _x (@ 3%O ₂)	Current PTO S-1114-10-25
SO _x	0.324 lb-SO _x /MMBtu		Current PTO S-1114-10-25
PM10	0.0713 lb-PM10/MMBtu		Current PTO S-1114-10-25
CO	0.031 lb-CO/MMBtu	42 ppmvd CO (@ 3%O ₂)	Current PTO S-1114-10-25
VOC	0.003 lb-VOC/MMBtu		Current PTO S-1114-10-25

This unit shares an annual SO_x Specific Limiting Condition (SLC) with unit -74, limiting the combined annual SO_x emissions from both units to 262,537 lb/yr.

S-1114-20-15:

Pollutant	Pre-Project Emission Factors (EF1)		Source
NO _x	0.0143 lb-NO _x /MMBtu	12 ppmvd NO _x (@ 3%O ₂)	Current PTO S-1114-20-15
SO _x	0.00285 lb-SO _x /MMBtu		Current PTO S-1114-20-15
PM10	0.005 lb-PM10/MMBtu		Current PTO S-1114-20-15
CO	0.037 lb-CO/MMBtu	50 ppmvd CO (@ 3%O ₂)	Current PTO S-1114-20-15
VOC	0.003 lb-VOC/MMBtu		Current PTO S-1114-20-15

S-1114-74-10:

Pollutant	Pre-Project Emission Factors (EF1)		Source
NO _x	0.0143 lb-NO _x /MMBtu	12 ppmvd NO _x (@ 3%O ₂)	Corrected PTO S- 1114-74-10
SO _x	0.324 lb-SO _x /MMBtu		Corrected PTO S- 1114-74-10
PM10	0.0713 lb-PM10/MMBtu		Corrected PTO S- 1114-74-10
CO	0.021 lb-CO/MMBtu	29 ppmvd CO (@ 3%O ₂)	Corrected PTO S- 1114-74-10
VOC	0.003 lb-VOC/MMBtu		Corrected PTO S- 1114-74-10

This unit shares an annual SO_x Specific Limiting Condition (SLC) with unit -10, limiting the combined annual SO_x emissions from both units to 262,537 lb/yr.

Post-Project Emissions Factors (EF2):

The applicant is requesting only to lower the NO_x emission factor from 12 ppmv @ 3% O₂ to 9 ppmv @ 3% O₂ for each unit (equivalent to 0.011 lb-NO_x/MMBtu). Therefore, for SO_x, PM₁₀, CO, and VOC, EF2 will equal EF1.

S-1114-10-29:

Pollutant	Post-Project Emission Factors (EF2)		Source
NO _x	0.011 lb-NO _x /MMBtu	9 ppmvd NO _x (@ 3%O ₂)	Proposed
SO _x	0.324 lb-SO _x /MMBtu		Current PTO S-1114-10-25
PM ₁₀	0.0713 lb-PM ₁₀ /MMBtu		Current PTO S-1114-10-25
CO	0.031 lb-CO/MMBtu	42 ppmvd CO (@ 3%O ₂)	Current PTO S-1114-10-25
VOC	0.003 lb-VOC/MMBtu		Current PTO S-1114-10-25

This unit shares an annual SO_x Specific Limiting Condition (SLC) with unit -74, limiting the combined annual SO_x emissions from both units to 262,537 lb/yr.

S-1114-20-17:

Pollutant	Post-Project Emission Factors (EF2)		Source
NO _x	0.011 lb-NO _x /MMBtu	9 ppmvd NO _x (@ 3%O ₂)	Proposed
SO _x	0.00285 lb-SO _x /MMBtu		Current PTO S-1114-20-15
PM ₁₀	0.005 lb-PM ₁₀ /MMBtu		Current PTO S-1114-20-15
CO	0.037 lb-CO/MMBtu	50 ppmvd CO (@ 3%O ₂)	Current PTO S-1114-20-15
VOC	0.003 lb-VOC/MMBtu		Current PTO S-1114-20-15

S-1114-74-14:

Pollutant	Post-Project Emission Factors (EF2)		Source
NO _x	0.011 lb-NO _x /MMBtu	9 ppmvd NO _x (@ 3%O ₂)	Proposed
SO _x	0.324 lb-SO _x /MMBtu		Corrected PTO S-1114-74-10
PM ₁₀	0.0713 lb-PM ₁₀ /MMBtu		Corrected PTO S-1114-74-10
CO	0.021 lb-CO/MMBtu	29 ppmvd CO (@ 3%O ₂)	Corrected PTO S-1114-74-10
VOC	0.003 lb-VOC/MMBtu		Corrected PTO S-1114-74-10

This unit shares an annual SO_x Specific Limiting Condition (SLC) with unit -10, limiting the combined annual SO_x emissions from both units to 262,537 lb/yr.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Pre-project calculations for each unit are shown below:

S-1114-10-25:

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO _x	0.0143	62.5	24	21.5
SO _x	0.324	62.5	24	486.0
PM ₁₀	0.0713	62.5	24	107.0
CO	0.031	62.5	24	46.5
VOC	0.003	62.5	24	4.5

Pollutant	Annual PE1		
	EF1 (lb/MMBtu)	Heat Input (MMBtu/year)	Annual PE1 (lb/year)
NO _x	0.0143	511,000	7,307
SO _x	0.324	511,000	165,564
PM ₁₀	0.0713	511,000	36,434
CO	0.031	511,000	15,841
VOC	0.003	511,000	1,533

S-1114-20-15:

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO _x	0.0143	62.5	24	21.5
SO _x	0.00285	62.5	24	4.3
PM ₁₀	0.005	62.5	24	7.5
CO	0.037	62.5	24	55.5
VOC	0.003	62.5	24	4.5

Pollutant	Annual PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO _x	0.0143	62.5	8,760	7,829
SO _x	0.00285	62.5	8,760	1,560
PM ₁₀	0.005	62.5	8,760	2,738
CO	0.037	62.5	8,760	20,258
VOC	0.003	62.5	8,760	1,643

S-1114-74-10:

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO _x	0.0143	62.5	24	21.5
SO _x	0.324	62.5	24	486.0
PM ₁₀	0.0713	62.5	24	107.0
CO	0.021	62.5	24	31.5
VOC	0.003	62.5	24	4.5

Pollutant	Annual PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO _x	0.0143	62.5	8,760	7,829
SO _x	0.324	62.5	8,760	177,390
PM ₁₀	0.0713	62.5	8,760	39,037
CO	0.021	62.5	8,760	11,498
VOC	0.003	62.5	8,760	1,643

2. Post-Project Potential to Emit (PE2):

Post-project calculations for each unit are shown below:

S-1114-10-29:

Pollutant	Daily PE2			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO_x	0.0110	62.5	24	16.5
SO_x	0.324	62.5	24	486.0
PM₁₀	0.0713	62.5	24	107.0
CO	0.031	62.5	24	46.5
VOC	0.003	62.5	24	4.5

Pollutant	Annual PE2		
	EF1 (lb/MMBtu)	Heat Input (MMBtu/year)	Annual PE2 (lb/year)
NO_x	0.011	511,000	5,621
SO_x	0.324	511,000	165,564
PM₁₀	0.0713	511,000	36,434
CO	0.031	511,000	15,841
VOC	0.003	511,000	1,533

S-1114-20-17:

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO _x	0.011	62.5	24	16.5
SO _x	0.00285	62.5	24	4.3
PM ₁₀	0.005	62.5	24	7.5
CO	0.037	62.5	24	55.5
VOC	0.003	62.5	24	4.5

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO _x	0.011	62.5	8,760	6,023
SO _x	0.00285	62.5	8,760	1,560
PM ₁₀	0.005	62.5	8,760	2,738
CO	0.037	62.5	8,760	20,258
VOC	0.003	62.5	8,760	1,643

S-1114-74-14:

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO _x	0.011	62.5	24	16.5
SO _x	0.324	62.5	24	486.0
PM ₁₀	0.0713	62.5	24	107.0
CO	0.021	62.5	24	31.5
VOC	0.003	62.5	24	4.5

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO _x	0.011	62.5	8,760	6,023
SO _x	0.324	62.5	8,760	177,390
PM ₁₀	0.0713	62.5	8,760	39,037
CO	0.021	62.5	8,760	11,498
VOC	0.003	62.5	8,760	1,643

3. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix B.

VIII. COMPLIANCE

District 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 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 descriptions that would exempt the applicant from an applicable requirement.

As discussed above, the modification proposed to each steam generator does not meet any of the criteria for a modification. Therefore, the units are not subject to the requirements of District Rule 2201.

In addition, in 2010, ATCs for these three steam generators were issued under District project S-1103506, which authorized multiple locations at which each of the three units could be operated at. The following condition was added to the permit for each unit at the time:

- Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201]

However, the permit for unit S-1114-20 already had the following condition:

- Approved locations for this steam generator are: NE/4 and SE/4 Section 15, Township 31 South, Range 22 East, and NE/4 Section 24, Township 26 South, Range 20 East, MDB&M. [District NSR Rule and CH&SC 41700]

This condition was inadvertently retained when the ATCs under project S-1103506 were issued, and the current permit for unit S-1114-20 lists both of the conditions above. In order to avoid redundancy and to maintain the intent of the ATCs issued under project S-1103506, the original condition will not be carried over to the proposed ATC for unit S-1114-20, and only the condition from project S-1103506 specifying the approved operating locations will be listed.

District Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC). Therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to

operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application.

District Rule 4001 New Source Performance Standards

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

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

No newly constructed or reconstructed units are proposed in this project, nor are the units being modified (as defined above). Therefore the NSPS requirements are not applicable to the proposed change in NOx emissions limit.

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 Ringelmann.1 or equivalent to 20% opacity.

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

- {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

This condition is already listed on facility-wide permit S-1114-0-3 as condition number 22. Once the ATCs are implemented, this condition will be removed from the individual permits.

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.

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

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

This condition is already listed on facility-wide permit S-1114-0-3 as condition number 42. Once the ATCs are implemented, this condition will be removed from the individual permits.

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 calculated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

District Rule 4201 Particulate Matter Concentration

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

Units -10 and -74 each has a PM10 emission factor of 0.0713 lb/MMBtu. Unit -20 has a lower PM10 emission factor of 0.005 lb/MMBtu. Therefore, the following calculation which shows compliance for a unit with a PM10 emission factor of 0.0713 lb/MMBtu will also indicate compliance for a unit with a PM10 emission factor of 0.005 lb/MMBtu.

F-Factor for NG:	8,578 dscf/MMBtu at 60 °F
PM10 Emission Factor:	0.0713 lb-PM10/MMBtu
Percentage of PM as PM10 in Exhaust:	100%
Exhaust Oxygen (O ₂) Concentration:	3%

$$\text{Excess Air Correction to F Factor} = \frac{20.9}{(20.9 - 3)} = 1.17$$

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

$$GL = 0.05 \text{ grain/dscf} < 0.1 \text{ grain/dscf}$$

Therefore, compliance with District Rule 4201 requirements is expected and a permit condition will be listed on the ATCs as follows:

- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

District Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO₂, NO₂, 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.

S-1114-10-29:

Pollutant	Hourly PE		
	Emission Factors	Heat input	Total
NO_x	0.011 (lb-NO _x /MMBtu)	x 62.5 (MMBtu/hr)	= 0.69 (lb-NO _x /hr)
SO_x	0.324 (lb-SO _x /MMBtu)	x 62.5 (MMBtu/hr)	= 20.25 (lb-SO _x /hr)
PM₁₀	0.0713 (lb-PM ₁₀ /MMBtu)	x 62.5 (MMBtu/hr)	= 4.46 (lb-PM ₁₀ /hr)

S-1114-20-17:

Pollutant	Hourly PE		
	Emission Factors	Heat input	Total
NO_x	0.011 (lb-NO _x /MMBtu)	x 62.5 (MMBtu/hr)	= 0.69 (lb-NO _x /hr)
SO_x	0.00285 (lb-SO _x /MMBtu)	x 62.5 (MMBtu/hr)	= 0.18 (lb-SO _x /hr)
PM₁₀	0.005 (lb-PM ₁₀ /MMBtu)	x 62.5 (MMBtu/hr)	= 0.31 (lb-PM ₁₀ /hr)

S-1114-74-14:

Pollutant	Hourly PE		
	Emission Factors	Heat input	Total
NO_x	0.011 (lb-NO _x /MMBtu)	x 62.5 (MMBtu/hr)	= 0.69 (lb-NO _x /hr)
SO_x	0.324 (lb-SO _x /MMBtu)	x 62.5 (MMBtu/hr)	= 20.25 (lb-SO _x /hr)
PM₁₀	0.0713 (lb-PM ₁₀ /MMBtu)	x 62.5 (MMBtu/hr)	= 4.46 (lb-PM ₁₀ /hr)

Summary:

District Rule 4301 Limits			
	NO ₂ (lb/hr)	SO ₂ (lb/hr)	Total PM (lb/hr)
ATC S-1114-10-29	0.69	20.25	4.46
ATC S-1114-20-17	0.69	0.18	0.31
ATC S-1114-74-14	0.69	20.25	4.46
Rule Limit	140	200	10

The above table indicates compliance with the maximum lb/hr emissions in this rule; 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, steam generators are not required to be tuned since the facility has proposed to use District approved Alternate Monitoring scheme "A" (District Policy SSP-1105), where the applicable emission limits are periodically monitored. Therefore, this unit is not subject to this rule.

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

The units are subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*. In addition, the units are also subject to 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 5.0 MMBtu/hr*.

Since the emission 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 requirements of District Rule 4305.

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

The units are also subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*. In addition, the units are also subject to District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater Than 5.0 MMBtu/hr*.

Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4306 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4306.

District Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr

This rule limits NO_x, 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 NO_x emitted over the previous year.

The units in this project are rated at greater than 5 MMBtu/hr heat input. Therefore, the units being modified under this project are subject to this rule.

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.

The facility has elected to comply with the emission limits specified in Sections 5.2 and 5.4. Therefore, Sections 5.3 and 5.5 will not be discussed.

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. On and after October 1, 2008, units shall not be operated in a manner to which exceeds a carbon monoxide (CO) emissions limit of 400 ppmv.

The units being modified are oilfield steam generators fired on less than 50%, by volume, PUC quality natural gas. Therefore, the applicable emissions limit for these units are specified in Category C.3 of Table 1, as summarized below:

Rule 4320 NO_x Emission Limits			
	NO_x Limit	Authority to Construct	Compliance Deadline
C. Oilfield Steam Generators			
3. Units firing on less than 50%, by volume, PUC quality gas	Stage Enhanced Schedule Initial Limit 12 ppmv or 0.014 lb/MMBtu ; and	July 1, 2010	July 1, 2011
	Final Limit 9 ppmv or 0.011 lb/MMBtu	January 1, 2013	January 1, 2014

The steam generators have a proposed NO_x emissions limit of 9 ppmv at 3% O₂, which meets the requirements of the Final Limit option of Category C.3 of Table 1 for NO_x emissions.

Additionally, each steam generator has an existing CO emissions limit of 50 ppmv at 3% O₂, or less, which meets the requirement of Section 5.2.1.

The following conditions will ensure compliance:

S-1114-10-29:

- Emissions rates shall not exceed any of the following: NO_x (as NO₂): 9 ppmv @ 3% O₂ or 0.011 lb/MMBtu, SO_x (as SO₂): 0.324 lb/MMBtu, PM₁₀: 0.0713 lb/MMBtu, CO: 42 ppmv @ 3% O₂ or 0.031 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

S-1114-20-17:

- Emissions rates shall not exceed any of the following limits: NO_x (as NO₂): 9 ppmv @ 3% O₂ or 0.011 lb/MMBtu, SO_x: 0.00285 lb/MMBtu, PM₁₀: 0.005 lb/MMBtu, CO: 50 ppmv @ 3% O₂ or 0.037 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

S-1114-74-14:

- Emissions rates shall not exceed any of the following: NO_x (as NO₂): 9 ppmv @ 3% O₂ or 0.011 lb/MMBtu, SO_x (as SO₂): 0.324 lb/MMBtu, PM₁₀: 0.0713 lb/MMBtu, CO: 29 ppmv @ 3% O₂ or 0.021 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

All Three Units:

- When PUC quality gas is burned, the total gas fired in this unit in any calendar month shall be less than 50% by volume PUC quality natural gas. [District Rule 4320]

Section 5.2.4 applies only to units operated on combinations of gaseous and liquid fuels. The steam generators only utilize gaseous fuel. Therefore, this section does not apply.

Section 5.4 lists the control requirements for particulate matter. Section 5.4.1 states that to limit particulate matter emissions, an operator shall comply with one of the following requirements:

- 5.4.1.1 On and after the applicable NO_x 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 NO_x 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 NO_x Compliance Deadline specified in Section 5.2 Table 1, operators shall install and properly operate an emission control system that reduces SO₂ emissions by at least 95% by weight, or limit exhaust SO₂ 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.

Units -10 and -74 are connected to a wet ESP-scrubber system with an expected SO₂ control efficiency of at least 95%. Additionally, unit -20 is authorized to combust only natural gas with a sulfur content not exceeding 1.0 gr S/100 scf.

The following conditions ensure compliance:

S-1114-10-29:

The following condition on the current PTO will be carried over to the ATC:

- Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rules 2201 and 4320]

S-1114-20-17:

The following condition on the current PTO will be carried over to the ATC. The SO_x emissions rate of 0.00285 lb/MMBtu is based on a sulfur content of 1.0 gr-S/100 dscf, thus ensuring compliance with the 5 gr-S/100 dscf limit listed in Section 5.4.1.2.

- Emissions rates shall not exceed any of the following limits: NO_x (as NO₂): 9 ppmv @ 3% O₂ or 0.011 lb/MMBtu, SO_x: 0.00285 lb/MMBtu, PM₁₀: 0.005 lb/MMBtu, CO: 50 ppmv @ 3% O₂ or 0.037 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

S-1114-74-14:

The following condition will be added to the ATC:

- Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 4320]

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

The facility is not proposing to use liquid fuel for the steam generators. Therefore this section does not apply.

Section 5.5 applies only to low use units installed prior to January 1, 2009. As previously discussed, this section does not apply to the steam generators.

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

No start-up or shutdown times are proposed for the units. Therefore, this section does not apply.

Section 5.7.1 requires that permit units subject to the emission limits specified in Section 5.2 shall either install and maintain an operational APCO approved Continuous Emission Monitoring System (CEMS) for NO_x, CO and O₂, or implement an APCO-approved alternate monitoring.

The facility proposes to implement Alternate Monitoring Scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO_x, CO, and O₂ exhaust concentrations be conducted at least once per month (in which a source test is not performed) using a portable analyzer.

Therefore, the following conditions on the current PTOs will be carried over to each ATC to ensure compliance with the requirements of the proposed alternate monitoring plan:

- 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. 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]
- 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]
- 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]
- 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 NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320]

Sections 5.7.2 and 5.7.3 apply to units subject to the requirements of Section 5.5. The steam generators are not subject to Section 5.5, therefore Sections 5.7.2 and 5.7.3 do not apply.

Section 5.7.4 applies to units operated at seasonal sources. This facility is not a seasonal source. Therefore this section does not apply.

Section 5.7.5 states that the APCO shall not approve an alternative monitoring system or parametric monitoring system unless it is documented that continued operation within ranges of specified emissions-related performance indicators or operational characteristics provides a reasonable assurance of compliance with applicable emission limits.

The facility has proposed to use an APCO-approved Alternate Monitoring System (Monitoring Scheme A). Therefore, this section is not applicable.

Section 5.7.6.1 states operators complying with Section 5.4.1.1 or 5.4.1.2 shall 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.

S-1114-20-17:

The following conditions on the current PTO will be carried over to the ATC:

- Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rules 2520, 9.3.2 and 4320, 5.7.6.1]
- If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89 for gaseous fuels. [District Rules 4305, 4306, and 4320]

Section 5.7.6.2 states operators complying with Section 5.4.1.3 by installing and operating a control device with 95% SO_x reduction shall propose the key system operating parameters and frequency of the monitoring and recording. The monitoring option proposed shall be submitted for approval by the APCO.

Units S-1114-10-29 and -74-14 have an existing control device with 95% SO_x reduction, which was installed and is currently operating in compliance with this rule. Existing monitoring requirements on the current PTOs will be carried over to the ATCs.

Section 5.7.6.3 states operators complying with Section 5.4.1.3 shall perform an annual source test unless a more frequent sampling and reporting period is included in the Permit to Operate. Source tests shall be performed in accordance with the test methods in Section 6.2.

Units S-1114-10-29 and -74-14 share a SO_x emissions control device. The following condition on the current PTO for unit -10 will be carried over to ATC -10-29, and will thus satisfy SO_x source testing requirements for both units.

- Source testing to demonstrate compliance with PM₁₀, SO_x, NO_x, and CO emission limits shall be conducted annually, except as provided below. [District Rules 2520, 9.3.2, 4305, 4306, and 4320]

Section 5.8.1 states that the operator of any unit shall have the option of complying with either the applicable heat input, in lb/MMBtu, emission limits or the concentration, in 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 on the current PTOs will be carried over to each ATC to ensure compliance:

- 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 states that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. Therefore, the following condition will be listed on each ATC:

- 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 4320. [District Rules 4305, 4306, and 4320]

Section 5.8.3 applies to units equipped with a Continuous Emissions Monitoring System (CEMS). The boiler is not equipped with CEMS. Therefore, this section does not apply.

Section 5.8.4 states 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 readings evenly spaced out over the 15-consecutive-minute period. Therefore, the following previously listed permit condition will be on the ATC:

- 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 states 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 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. Therefore, the following condition on the current PTOs will be carried over to each ATC to ensure compliance:

- {4352} 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 states 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. Therefore, the following condition on the current PTOs will be carried over to each ATC to ensure compliance:

- All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

Section 6.1.1 applies to units operating under the exemption of Section 4.2. The boiler is not operating under the exemption of Section 4.2. Therefore, this section does not apply.

Section 6.1.2 applies to any unit that is subject to the requirements of Section 5.5. The boiler is not subject to the requirements of Section 5.5. Therefore, this section does not apply.

Section 6.1.3 states that the operator of any unit subject to Section 5.5.1 or Section 6.3.1 shall maintain records to verify that the required tune-up and the required monitoring of the operational characteristics of the unit have been performed.

The units are subject to the monitoring requirements of Section 6.3.1. Therefore, the following previously listed condition will be added to each ATC to ensure compliance:

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

Section 6.1.4 states that the operator performing start-up or shutdown of a unit shall keep records of the duration of each start-up or shutdown. The unit is not subject to start-up and shutdown provisions. Therefore this section does not apply.

Section 6.1.5 applies only to units firing on liquid fuel during PUC-quality natural gas curtailment. The boiler is not fired on liquid fuel. Therefore this section does not apply.

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
SO _x	ppmv	EPA Method 6C, EPA Method 8, 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 on the current PTOs will be carried over to the ATCs to ensure compliance:

Each ATC:

- {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]

S-1114-10-29 and -74-14:

- The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, sulfur oxides - ARB Methods 1-6, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, and 4320]

S-1114-20-17:

- NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]
- CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
- Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]

Section 6.3.1 requires that units be tested to determine compliance with the applicable requirements of Section 5.2 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 36 months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits specified in Section 5.2, the source testing frequency shall revert to at least once every 12 months.

The existing monitoring requirements for the three steam generators show that each unit already meets proposed emissions limits. Therefore, no initial source testing will be required. However, annual source testing will be required until compliance with two consecutive source tests is shown. The following conditions from the current PTOs will be carried over to the ATCs:

S-1114-10-29:

- Source testing to demonstrate compliance with PM10, SOx, NOx, and CO emission limits shall be conducted annually, except as provided below. [District Rules 2520, 9.3.2, 4305, 4306, and 4320]
- 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, 4306, and 4320]
- 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, 4306, and 4320]
- The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

S-1114-20-17:

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

S-1114-74-14:

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

The following condition is not on the current PTO and will be added to the ATC:

- Source testing to measure NO_x 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]

Section 6.3.2 states that in lieu of compliance with Section 6.3.1, compliance with the applicable emission limits in Section 5.2 shall be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units.

The current PTOs for units S-1114-10 and -20 do not allow for representative testing, nor has the facility proposed it for these two units. The current PTO for unit -74 does allow for representative testing. The following condition on the current PTO will be carried over to the ATC:

- 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 NO_x and CO source testing requirement. [District Rules 4305, 4306, and 4320]

Section 6.4 details the requirements of an emission control plan for units covered by Rule 4320. The proposed unit will comply with the emission limits presented in Section 5.2, and with the alternate monitoring and source testing requirements. Therefore, the current application satisfies the requirements for an ECP, as presented in Section 6.4. No further discussion is required.

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

This rule applies to boilers, steam generators, and process heaters at NO_x Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. If applicable, the emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the unit is operated in compliance with Rule 4306. Therefore, compliance with this rule 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 SO₂, on a dry basis averaged over 15 consecutive minutes.

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

$$\text{Volume SO}_2 = \frac{nRT}{P}$$

With:

$$N = \text{moles SO}_2$$

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

P (Standard Pressure) = 14.7 psi

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

Units -10 and -74 each has a SOx emission factor of 0.324 lb/MMBtu. Unit -20 has a lower SOx emission factor of 0.00285 lb/MMBtu. Therefore, the following calculation which shows compliance for a unit with a SOx emission factor of 0.324 lb/MMBtu will also indicate compliance for a unit with a SOx emission factor of 0.00285 lb/MMBtu.

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

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

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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 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; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District has determined that potential emission increases would have a less than significant health impact on sensitive receptors.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District

concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Issue ATCs S-1114-10-29, S-1114-20-17, and S-1114-74-14 subject to the permit conditions on the attached draft ATCs in Appendix C.

X. BILLING INFORMATION

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1114-10-29	3020-02-H	62.5 MMBtu/hr	\$ 1,030
S-1114-20-17	3020-02-H	62.5 MMBtu/hr	\$ 1,030
S-1114-74-14	3020-02-H	62.5 MMBtu/hr	\$ 1,030

APPENDICES

- Appendix A: Current Permits to Operate
- Appendix B: QNEC
- Appendix C: Draft ATCs
- Appendix D: Emissions Profiles

APPENDIX A

Current Permits to Operate

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1114-10-25

EXPIRATION DATE: 02/29/2016

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

EQUIPMENT DESCRIPTION:

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

PERMIT UNIT REQUIREMENTS

1. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201] Federally Enforceable Through Title V Permit
2. 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] Federally Enforceable Through Title V Permit
3. 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
4. Total fuel consumption, including TEOR gas, shall not exceed 511,000 MMBtu/year. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Except as provided below, fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
6. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, double GC for H₂S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
7. When PUC quality gas is burned, the total gas fired in this unit in any calendar month shall be less than 50% by volume PUC quality natural gas. [District Rule 4320] Federally Enforceable Through Title V Permit
8. In months where PUC quality gas is burned, the permittee shall maintain records on a calendar month basis of the volume of PUC quality natural gas and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320] Federally Enforceable Through Title V Permit
9. 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 NSR Rule] Federally Enforceable Through Title V Permit
10. Exhaust from unit shall be directed only to SO₂ scrubber authorized herein except when burning PUC regulated natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit

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

11. Scrubber/wet ESP shall be in operation when combusting TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Emission rate of SO_x from S-1114-10, and '-74 shall not exceed 262,537 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit
14. 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 NSR Rule] Federally Enforceable Through Title V Permit
15. Scrubber liquor pH shall be maintained between 6 and 8, and shall be continuously monitored. [District NSR Rule and 40 CFR part 64] Federally Enforceable Through Title V Permit
16. Scrubber mist eliminator shall be properly cleaned and maintained. [District NSR Rule] Federally Enforceable Through Title V Permit
17. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than 8.0 gpm/1000 acfm. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 2201] Federally Enforceable Through Title V Permit
19. When any unit connected to scrubber is burning TEOR gas, scrubber 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 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] Federally Enforceable Through Title V Permit
20. 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
21. When complying with PM₁₀ and SO_x 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. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SO_x 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 NSR Rule] Federally Enforceable Through Title V Permit
22. 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 NSR Rule] Federally Enforceable Through Title V Permit
23. Emissions rates shall not exceed any of the following: NO_x (as NO₂): 12 ppmv @ 3% O₂, SO_x (as SO₂) 0.324 lb/MMBtu, PM₁₀: 0.0713 lb/MMBtu, CO: 42 ppmv @ 3% O₂, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Source testing to demonstrate compliance with PM₁₀, SO_x, NO_x, and CO emission limits shall be conducted annually, except as provided below. [District Rules 2520, 9.3.2, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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

25. Source testing to demonstrate compliance with PM₁₀, SO_x, NO_x, 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, 4306, and 4320] Federally Enforceable Through Title V Permit
26. If permittee fails any compliance demonstration for NO_x and/or CO emission limits when testing not less than once every 36 months, compliance with NO_x and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Compliance source testing shall be conducted under conditions representative of normal operation. [District NSR Rule] Federally Enforceable Through Title V Permit
28. 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 NO_x and CO source testing requirement. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. 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
30. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 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
33. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. 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] Federally Enforceable Through Title V Permit
35. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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

36. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] 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 NSR Rule] 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. 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
41. 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
42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. Compliance with permit conditions in the Title V permit shall be deemed compliance with the 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
44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

52. 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
53. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be inspected monthly for detectable leaks. Operator shall repair each leak within 15 calendar days of detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
54. Records of steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork monthly inspections shall be maintained. Inspection log shall contain at a minimum the following: 1) date of inspection; 2) name of inspector; 3) identification and location of leak; and 4) date when leak has been repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
55. 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

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1114-20-15

EXPIRATION DATE: 02/29/2016

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

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR STRUTHERS NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE BURNER, MULTIPLE LOCATIONS - M & M GENERATOR #5

PERMIT UNIT REQUIREMENTS

1. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201] Federally Enforceable Through Title V Permit
2. 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] Federally Enforceable Through Title V Permit
3. 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
4. Approved locations for this steam generator are: NE/4 and SE/4 Section 15, Township 31 South, Range 22 East, and NE/4 Section 24, Township 26 South, Range 20 East, MDB&M. [District NSR Rule and CH&SC 41700] Federally Enforceable Through Title V Permit
5. Except as provided below, fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
6. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, double GC for H₂S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
7. When PUC quality gas is burned, the total gas fired in this unit in any calendar month shall be less than 50% by volume PUC quality natural gas. [District Rule 4320] Federally Enforceable Through Title V Permit
8. In months where PUC quality gas is burned, the permittee shall maintain records on a calendar month basis of the volume of PUC quality natural gas and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320] Federally Enforceable Through Title V Permit
9. 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 NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. Emissions rates from the natural gas-fired unit shall not exceed any of the following limits: 12 ppmv NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 50 ppmv CO @ 3% O₂ or 0.037 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District NSR Rule, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. 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] Federally Enforceable Through Title V Permit
13. 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
14. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 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. 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
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, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. 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
25. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. 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
29. 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
30. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
31. 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
32. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1114-74-10

EXPIRATION DATE: 02/29/2016

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

EQUIPMENT DESCRIPTION:

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

PERMIT UNIT REQUIREMENTS

1. 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
2. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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 and Kern County Rule 107] Federally Enforceable Through Title V Permit
4. 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]
5. When operating at NE15, T31S/R22E, scrubber shall be used when burning TEOR gas. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Except as provided below, fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
7. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, double GC for H₂S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
8. When PUC quality gas is burned, the total gas fired in this unit in any calendar month shall be less than 50% by volume PUC quality natural gas. [District Rule 4320] Federally Enforceable Through Title V Permit
9. In months where PUC quality gas is burned, the permittee shall maintain records on a calendar month basis of the volume of PUC quality natural gas and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320] Federally Enforceable Through Title V Permit
10. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Emission rates of SO_x for units S-1114-10 and '-74 shall not exceed 262,537 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. Emission rate of NO_x (as NO₂) shall not exceed 12 ppmv @ 3% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Emission rates shall not exceed PM₁₀: 0.0713 lb/MMBtu, SO_x (as SO₂): 0.324 lb/MMBtu, VOC: 0.003 lb/MMBtu, and CO: 29 ppmv at 3% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. At no time shall TEOR gas introduced to this unit and all units connected to scrubber exceed the amount introduced during a source test demonstrating compliance with permit limits. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Source testing to demonstrate compliance with NO_x and CO emission limits shall be conducted not less than once every 12 months thereafter, except as provided below. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing to demonstrate compliance with NO_x 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, 4306, and 4320] Federally Enforceable Through Title V Permit
17. If permittee fails any compliance demonstration for NO_x and/or CO emission limits when testing not less than once every 36 months, compliance with NO_x and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance source testing shall be conducted under conditions representative of normal operation. [District NSR Rule] Federally Enforceable Through Title V Permit
19. 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 NO_x and CO source testing requirement. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. 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
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] 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
23. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, sulfur oxides - ARB Methods 1-6, 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
24. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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

25. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] 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 NSR Rule] Federally Enforceable Through Title V Permit
29. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be inspected monthly for detectable leaks. Operator shall repair each leak within 15 calendar days of detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. Records of steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork monthly inspections shall be maintained. Inspection log shall contain at a minimum the following: 1) date of inspection; 2) name of inspector; 3) identification and location of leak; and 4) date when leak has been repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. 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
32. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. [District Rule 4301] Federally Enforceable Through Title V Permit
33. 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. [Kern County Rule 407] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
35. 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
36. When the scrubber is operating, scrubber liquor pH shall be maintained between 6 and 8, and shall be continuously monitored. [40 CFR part 64] Federally Enforceable Through Title V Permit
37. 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

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

38. 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
39. 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
40. 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
41. 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
42. 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
43. 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
44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
45. 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
46. 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

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

APPENDIX B

QNEC

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

- QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
- PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
- PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$PE_{\text{quarterly}} = PE_{\text{annual}} \div 4 \text{ quarters/year}$$

S-1141-10-29:

Pre-Project Quarterly Emissions					
Pollutant	Annual Emissions (lb/yr)		qtr/yr		Quarterly Emissions (lb/qtr)
NO _x	7,307	÷	4	=	1,827
SO _x	See SLC calculation below				
PM ₁₀	36,434	÷	4	=	9,109
CO	15,841	÷	4	=	3,960
VOC	1,533	÷	4	=	383

Post-Project Quarterly Emissions					
Pollutant	Annual Emissions (lb/yr)		qtr/yr		Quarterly Emissions (lb/qtr)
NO _x	5,621	÷	4	=	1,405
SO _x	See SLC calculation below				
PM ₁₀	36,434	÷	4	=	9,109
CO	15,841	÷	4	=	3,960
VOC	1,533	÷	4	=	383

Quarterly NEC (lb/qtr)			
Pollutant	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	1,405	1,827	-422
SO _x	See SLC calculation below		
PM ₁₀	9,109	9,109	0
CO	3,960	3,960	0
VOC	383	383	0

S-1141-20-17:

Pre-Project Quarterly Emissions					
Pollutant	Annual Emissions (lb/yr)		qtr/yr		Quarterly Emissions (lb/qtr)
NOx	7,829	÷	4	=	1,957
SOx	1,560	÷	4	=	390
PM ₁₀	2,738	÷	4	=	685
CO	20,258	÷	4	=	5,065
VOC	1,643	÷	4	=	411

Post-Project Quarterly Emissions					
Pollutant	Annual Emissions (lb/yr)		qtr/yr		Quarterly Emissions (lb/qtr)
NOx	6,023	÷	4	=	1,506
SOx	1,560	÷	4	=	390
PM ₁₀	2,738	÷	4	=	685
CO	20,258	÷	4	=	5,065
VOC	1,643	÷	4	=	411

Quarterly NEC (lb/qtr)			
Pollutant	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	1,506	1,957	-451
SO _x	390	390	0
PM ₁₀	685	685	0
CO	5,065	5,065	0
VOC	411	411	0

S-1141-74-14:

Pre-Project Quarterly Emissions					
Pollutant	Annual Emissions (lb/yr)		qtr/yr		Quarterly Emissions (lb/qtr)
NOx	7,829	÷	4	=	1,957
SOx	See SLC calculation below				
PM ₁₀	39,037	÷	4	=	9,759
CO	11,498	÷	4	=	2,875
VOC	1,643	÷	4	=	411

Post-Project Quarterly Emissions					
Pollutant	Annual Emissions (lb/yr)		qtr/yr		Quarterly Emissions (lb/qtr)
NOx	6,023	÷	4	=	1,506
SOx	See SLC calculation below				
PM ₁₀	39,037	÷	4	=	9,759
CO	11,498	÷	4	=	2,875
VOC	1,643	÷	4	=	411

Quarterly NEC (lb/qtr)			
Pollutant	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	1,506	1,957	-451
SO _x	See SLC calculation below		
PM ₁₀	9,759	9,759	0
CO	2,875	2,875	0
VOC	411	411	0

For units S-1114-10-29 and -74-14 which share a SOx SLC:

$NEC_{SLC} = PE2_{SLC} - PE1_{SLC}$, where:

NEC_{SLC} = Quarterly Net Emissions Change for units covered by the SLC.

$PE2_{SLC}$ = PE2 for all units covered by the SLC.

$PE1_{SLC}$ = PE1 for all units covered by the SLC.

The pre-project and post-project SLC is 262,537 lb/yr. Because there is no change to the SLC, the quarterly change is 0 lb-SOx/qtr.

For units S-1114-10-29 and -74-14, the annual SOx SLC of 262,537 lb/yr will be equally distributed when entering annual emissions into the PAS emissions profile. That is, 131,269 lb-SOX/yr will be entered for unit -10-29 and 131,268 lb/yr will be entered for unit -74-14.

APPENDIX C

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1114-10-29

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-1114-74: LOWER NOX EMISSION LIMIT TO 9 PPMVD @ 3% O2 FOR DISTRICT RULE 4320 COMPLIANCE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

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-1114-10-29 Jun 25 2013 2:41PM - SANDHUG : Joint Inspection NOT Required

6. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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
9. Total fuel consumption, including TEOR gas, shall not exceed 511,000 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Except as provided below, fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
11. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, double GC for H₂S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
12. When PUC quality gas is burned, the total gas fired in this unit in any calendar month shall be less than 50% by volume PUC quality natural gas. [District Rule 4320] Federally Enforceable Through Title V Permit
13. In months where PUC quality gas is burned, the permittee shall maintain records on a calendar month basis of the volume of PUC quality natural gas and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320] Federally Enforceable Through Title V Permit
14. 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
15. Exhaust from unit shall be directed only to SO₂ scrubber authorized herein except when burning PUC regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Scrubber/wet ESP shall be in operation when combusting TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. Emission rate of SO_x from S-1114-10, and '-74 shall not exceed 262,537 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
19. 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
20. Scrubber liquor pH shall be maintained between 6 and 8, and shall be continuously monitored. [District Rule 2201 and 40 CFR part 64] Federally Enforceable Through Title V Permit
21. Scrubber mist eliminator shall be properly cleaned and maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
22. 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
23. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

24. When any unit connected to scrubber is burning TEOR gas, scrubber 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 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
25. 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
26. 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. 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
27. 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
28. Emissions rates shall not exceed any of the following: NOx (as NO2): 9 ppmv @ 3% O2 or 0.011 lb/MMBtu, SOx (as SO2): 0.324 lb/MMBtu, PM10: 0.0713 lb/MMBtu, CO: 42 ppmv @ 3% O2 or 0.031 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Source testing to demonstrate compliance with PM10, SOx, NOx, and CO emission limits shall be conducted annually, except as provided below. [District Rules 2520, 9.3.2, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. 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, 4306, and 4320] Federally Enforceable Through Title V Permit
31. 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, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 2201] Federally Enforceable Through Title V Permit
33. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320]
34. 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
35. 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
36. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

37. 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
38. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, sulfur oxides - ARB Methods 1-6, 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
39. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
40. 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] Federally Enforceable Through Title V Permit
41. 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
42. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
43. 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
44. 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
45. 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
46. 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
47. 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

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CONDITIONS CONTINUE ON NEXT PAGE

48. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. 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
50. 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
51. 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
52. 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
53. 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
54. 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
55. 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
56. 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
57. 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
58. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be inspected monthly for detectable leaks. Operator shall repair each leak within 15 calendar days of detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
59. Records of steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork monthly inspections shall be maintained. Inspection log shall contain at a minimum the following: 1) date of inspection; 2) name of inspector; 3) identification and location of leak; and 4) date when leak has been repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
60. 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
61. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1114-20-17

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 STRUTHERS NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE BURNER, MULTIPLE LOCATIONS - M & M GENERATOR #5: LOWER NOX EMISSION LIMIT TO 9 PPMVD @ 3% O2 FOR DISTRICT RULE 4320 COMPLIANCE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [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-1114-20-17 : Jul 1 2013 8:36AM - SANDHUG : Joint Inspection NOT Required

7. 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]
8. 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 Rules 4201 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
9. Except as provided below, fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
10. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, double GC for H₂S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
11. When PUC quality gas is burned, the total gas fired in this unit in any calendar month shall be less than 50% by volume PUC quality natural gas. [District Rule 4320] Federally Enforceable Through Title V Permit
12. In months where PUC quality gas is burned, the permittee shall maintain records on a calendar month basis of the volume of PUC quality natural gas and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320] Federally Enforceable Through Title V Permit
13. 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
14. Emissions rates shall not exceed any of the following limits: NO_x (as NO₂): 9 ppmv @ 3% O₂ or 0.011 lb/MMBtu, SO_x: 0.00285 lb/MMBtu, PM₁₀: 0.005 lb/MMBtu, CO: 50 ppmv @ 3% O₂ or 0.037 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. 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] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

18. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. 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 4320. [District Rules 4305, 4306, and 4320] 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. 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
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted 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
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. 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 Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
29. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rules 2520, 9.3.2 and 4320, 5.7.6.1] Federally Enforceable Through Title V Permit
30. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89 for gaseous fuels. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

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 and Kern County Rule 407] Federally Enforceable Through Title V Permit
33. 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
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
35. 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
36. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1114-74-14

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/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: LOWER NOX EMISSION LIMIT TO 9 PPMVD @ 3% O2 FOR DISTRICT RULE 4320 COMPLIANCE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
5. {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

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-1114-74-14; Jun 25 2013 2:42PM - SANDHUG : Joint Inspection NOT Required

6. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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 and Kern County Rule 107] Federally Enforceable Through Title V Permit
8. 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]
9. When operating at NE15, T31S/R22E, scrubber shall be used when burning TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Except as provided below, fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
11. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, double GC for H₂S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
12. When PUC quality gas is burned, the total gas fired in this unit in any calendar month shall be less than 50% by volume PUC quality natural gas. [District Rule 4320] Federally Enforceable Through Title V Permit
13. In months where PUC quality gas is burned, the permittee shall maintain records on a calendar month basis of the volume of PUC quality natural gas and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320] Federally Enforceable Through Title V Permit
14. 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
15. Emission rates of SO_x for units S-1114-10 and '74 shall not exceed 262,537 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Emissions rates shall not exceed any of the following: NO_x (as NO₂): 9 ppmv @ 3% O₂ or 0.011 lb/MMBtu, SO_x (as SO₂): 0.324 lb/MMBtu, PM₁₀: 0.0713 lb/MMBtu, CO: 29 ppmv @ 3% O₂ or 0.021 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. At no time shall TEOR gas introduced to this unit and all units connected to scrubber exceed the amount introduced during a source test demonstrating compliance with permit limits. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to measure NO_x 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
19. Compliance source testing shall be conducted under conditions representative of normal operation. [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 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. 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 NO_x and CO source testing requirement. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

22. 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
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, sulfur oxides - ARB Methods 1-6, 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
26. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. 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] Federally Enforceable Through Title V Permit
28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. 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
31. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be inspected monthly for detectable leaks. Operator shall repair each leak within 15 calendar days of detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. Records of steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork monthly inspections shall be maintained. Inspection log shall contain at a minimum the following: 1) date of inspection; 2) name of inspector; 3) identification and location of leak; and 4) date when leak has been repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. 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

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CONDITIONS CONTINUE ON NEXT PAGE

34. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. [District Rule 4301] Federally Enforceable Through Title V Permit
35. 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. [Kern County Rule 407] Federally Enforceable Through Title V Permit
36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: 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
38. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 4320] Federally Enforceable Through Title V Permit
39. When the scrubber is operating, scrubber liquor pH shall be maintained between 6 and 8, and shall be continuously monitored. [40 CFR part 64] Federally Enforceable Through Title V Permit
40. 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
41. 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
42. 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
43. 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
44. 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
45. 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
46. 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
47. 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
48. 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
49. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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APPENDIX D
Emissions Profiles

Permit #: S-1114-10-29	Last Updated
Facility: SENECA RESOURCES	06/25/2013 SANDHUG

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	5621.0	131269.0	36434.0	15841.0	1533.0
Daily Emis. Limit (lb/Day)	16.5	486.0	107.0	46.5	4.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-422.0	0.0	0.0	0.0	0.0
Q2:	-422.0	0.0	0.0	0.0	0.0
Q3:	-422.0	0.0	0.0	0.0	0.0
Q4:	-422.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1114-20-17	Last Updated
Facility: SENECA RESOURCES	06/25/2013 SANDHUG

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	6023.0	1560.0	2738.0	20258.0	1643.0
Daily Emis. Limit (lb/Day)	16.5	4.3	7.5	55.5	4.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-451.0	0.0	0.0	0.0	0.0
Q2:	-451.0	0.0	0.0	0.0	0.0
Q3:	-451.0	0.0	0.0	0.0	0.0
Q4:	-451.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1114-74-14	Last Updated
Facility: SENECA RESOURCES	06/25/2013 SANDHUG

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	6023.0	131268.0	39037.0	11498.0	1643.0
Daily Emis. Limit (lb/Day)	16.5	486.0	107.0	31.5	4.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-451.0	0.0	0.0	0.0	0.0
Q2:	-451.0	0.0	0.0	0.0	0.0
Q3:	-451.0	0.0	0.0	0.0	0.0
Q4:	-451.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					