



JUL 0 6 2017

Mr. Tim Alburger Seneca Resources 4800 Corporate Court Bakersfield, CA 93311

Re:

Proposed ATC / Certificate of Conformity (Significant Mod)

District Facility # S-1114

Project # 1171563

Dear Mr. Alburger:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes a heater and vessel.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

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

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet

Director of Permit Services

Enclosures

cc:

Tung Le, CARB (w/enclosure) via email

CC:

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

Seyed Sadredin

San Joaquin Valley Air Pollution Control District **Authority to Construct**

10 MMBtu/hr. Heater Treater and Wemco

Facility Name: Seneca Resources

Date: June 12, 2017

Mailing Address: 4800 Corporate Court

Engineer: Richard Edgehill

Bakersfield, CA 93311

Lead Engineer: Steve Leonard

Contact Person: Tim Alburger

Telephone: (661) 399-4270 #3544

Fax: (661) 399-7706

Application #(s): S-1114-78-9, 140-0, and '-141-0

Project #: 1171563

Deemed Complete: April 26, 2017

I. **PROPOSAL**

Seneca Resources (Seneca) has requested an Authority to Construct (ATC) for a 10 MM Btu/hr heater treater (ATC S-1114-140-0) and Wemco-type depurator (ATC S-1114-141-0) tied to existing vapor recovery system listed on tank S-1114-78 (ATC S-1114-78-9).

Note that the fugitive emissions components associated with the new Wemco and heater treater will process gas expected to contain less than 10% VOCs by wt. Therefore, according to District policy SSP 2015, fugitive emissions are not assessed.

The project is a Federal Major Modification. BACT, offsets and public notice are required.

Current PTO S-1114-78-7 is included in Attachment I.

Seneca facility S-1114 has a Title V permit. The project is a Federal Major Modification and therefore it is classified as a Title V Significant Modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Seneca must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

APPLICABLE RULES

District Rule 2201 New and Modified Stationary Source Review Rule (2/18/16)

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

District Rule 4001 New Source Performance Standards (4/14/99)

Visible Emissions (2/17/05) District Rule 4101

District Rule 4102 Nuisance (12/17/92) District Rule 4201 Particulate Matter Concentration (12/17/92)

District Rule 4301 Fuel Burning Equipment (12/17/92)

District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)

District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/08)

Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr. (10/16/08)

District Rule 4623 Storage of Organic Liquid (5/19/2005)

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 heater treater and Wemco will be located within Seneca's heavy oil western stationary source (facilities S-1114, S-3007, S-3755, and S-4159) (North Midway Sunset) Section 15, T31S, R22E. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. PROCESS DESCRIPTION

The new heater treater will be used for oil water separation at North Midway Sunset.

In order to comply with District Rule 4320 NOx requirements, the applicant is proposing emissions limits of 9 ppmv NOx @ 3% O₂.and 50 ppmv @3% O₂ CO. The unit is equipped with two separate 5.0 MMBtu/hr. burners. Natural gas with a sulfur content not exceeding 1.0 gr S/100 scf is proposed as fuel.

The new Wemco will be served by an existing vapor control system S-1114-78 with a vapor control effciency of at least 95% by permit condition.

V. EQUIPMENT LISTING

Pre-Project Equipment Description:

PTO S-1114-78-7: 5,000 BBL FIXED ROOF FREE WATER KNOCKOUT TANK T-1 W/VAPOR CONTROL SYSTEM INCLUDING HEAT EXCHANGER, LIQUID KNOCKOUT VESSELS, & VAPOR COMPRESSOR WITH PIPING TO STEAM GENERATOR S-1114-74, HEATER TREATERS S-1114-83 & 84, AND SERVING TANKS S-1114-78,79,80,81,82,85,86,87,104,105 AND 106 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

Proposed Modification:

ATC S-1114-78-9: MODIFICATION OF 5,000 BBL FIXED ROOF FREE WATER KNOCKOUT TANK T-1 W/VAPOR CONTROL SYSTEM INCLUDING

HEAT EXCHANGER, LIQUID KNOCKOUT VESSELS, & VAPOR COMPRESSOR WITH PIPING TO STEAM GENERATOR S-1114-74, HEATER TREATERS S-1114-83 & 84, AND SERVING TANKS S-1114-78,79,80,81,82,85,86,87,104,105 AND 106 (MIDWAY SUNSET FIELD 15A TANK BATTERY): CONNECT HEATER TREATER S-1114-140 AND WEMCO S-1114-141 TO VAPOR CONTROL SYSTEM

Post Project Equipment Description:

S-1114-78-7: 5,000 BBL FIXED ROOF FREE WATER KNOCKOUT TANK T-1 W/VAPOR CONTROL SYSTEM INCLUDING HEAT EXCHANGER, LIQUID KNOCKOUT VESSELS, & VAPOR COMPRESSOR WITH PIPING TO STEAM GENERATOR S-1114-74, HEATER TREATERS S-1114-83, 84 & 140 AND SERVING TANKS S-1114-78,79,80,81,82,85,86,87,104,105 AND 106, AND WEMCO S-1114-141 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

S-1114-140-0: 10 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER WITH TWO SEPARATE 5.0 MMBTU/HR LO NOx BURNERS

S-1114-141-0: WEMCO UNIT WITH VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1114-78

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

Low-NOx burners reduce NOx 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-NOx 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 NOx. 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.

Manufacturer's information on the low NOx burner is provided in Attachment II.

Sulfur Control

The ATC requires that gas combusted contain no more than 1 gr S/100 scf.

VII. GENERAL CALCULATIONS

A. Assumptions

The maximum operating schedule is 24 hours per day.

Annual pre-project and post-project potential to emit are calculated based on 8760 hours of operation per year.

Modifying the tank vapor control system to connect a new tank to the system is not a NSR modification; therefore, tank S-1114-78 is not being modified and does not require calculations. PE2 will be calculated for inclusion in PAS. There is no change in emissions with connection of the heater treater and Wemco tank of the vapor control system.

Process gas expected to contain less than 10% VOCs by wt. Therefore, according to District policy SSP 2015, fugitive emissions are not assessed.

Component counts and fugitive emissions for Heater Treater ('-140) and Wemco ('-141) for HRA

Component Type	Emissions Factor lb/day- component*	number	Lb/day	Lb/yr
Valve	0.2381	11	2.62	956
Others	0.4656	0	0	0
Connectors	0.01058	0	0	0
Flanges	0.02604	24	0.625	228
Total			3.2	1,184

^{*}EPA Protocol Equipment Leak Emissions Factors, Table 2-4, EPA-453/R-95-017, November 1995, TABLE 2-4. OIL AND GAS PRODUCTION OPERATIONS AVERAGE EMISSION FACTORS (lb/day/source)

B. Emission Factors

Post-Project Emission Factors (EF2)

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

Pollutant	Post-Project Emission Factors (EF2)					
NO _X	11 lb-NO _X /MMscf**	0.011 lb-NO _X /MMBtu	9 ppmvd NO _X (@ 3%O ₂)	Proposed		
SO _X	2.85 lb-SO _x /MMscf**	0.00285 lb-SO _X /MMBtu		District Policy APR 1720		
PM10	7.0 lb-PM10/MMscf**	0.007 lb-PM10/MMBtu		Proposed*		
со	37 lb-CO/MMscf**	0.037 lb-CO/MMBtu	50 ppmvd CO (@ 3%O ₂)	ú		
voc	2.0 lb-VOC/MMscf**	0.002 lb-VOC/MMBtu		55		

^{*}District email to applicant 4/20/17

^{**} assumed 1000 Btu/scf heating value

C. Calculations

1. Pre-Project Potential to Emit (PE1)

S-1114-140 and '-141

Since these are new emissions units, PE1 = 0 for all pollutants.

2. Post-Project Potential to Emit (PE2)

The PE2 for each pollutant is calculated with the following equation:

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

S-1114-78-9

VOCs: 0 lb/day, 0 lb/yr (< 10% VOCs by wt in vapor)

S-1114-140-0

	Daily PE2						
Pollutant (It	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)			
NO _X *	0.011	10	24	2.6			
SO _X	0.00285	10	24	0.7			
PM ₁₀	0.0070	10	. 24	1,7			
CO	0.037	10	24	8.9			
VOC	0.0020	10	24	0.5			

Pollutant EF2 (lb/MMB		Annual PE2						
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)				
NO _X	0.011	10	8,760	964				
SO _X	0.00285	10	8,760	250				
PM ₁₀	0.0070	10	8,760	613				
CO	0.037	10	8,760	3,241				
VOC	0.0020	10	8,760	175				

Fugitive emissions:

VOCs: 0 lb/day, 0 lb/yr (< 10% VOCs by wt in vapor)

<u>S-1114-141-0</u>

VOCs: 0 lb/day, 0 lb/yr (< 10% VOCs by wt in vapor)

Emissions Profiles are included in Attachment III.

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

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

SSPE1 (lb/year)							
Permit Unit	NOx	SOx	PM ₁₀	CO	VOC		
SSPE Calculator	94,069	382,659	121,782	121,782	170,095		
S-1114-125-1	4,617	2122	5659	13,775	3999		
S-1114-133-0	472	124	300	1587	86		
S-1114-134-0	1,156	305	736	3889	210		
S-1114-136-0	4,542	2122	5659	13,775	3999		
ATCs S-3007-21 thru '23	0	0	0	Ô	312		
SSPE1*	108,856	387,332	134,136	154,808	178,701		

^{*}includes ATCs with significant emissions increases, does not include ERCs There are no outstanding ATCs for S-3755, S-4159, The facility has no CO ERCs.

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

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)							
Permit Unit	NOx	SOx	PM ₁₀	СО	VOC		
SSPE1	108,856	387,332	134,136	154,808	178,701		
S-1114-140-0	964	250	613	3,241	175		
S-1114-141-0	0	0	0	0	0		
SSPE2	109,820	387,582	134,749	158,049	178,876		

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in

40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NO _X	SO _X	PM ₁₀	СО	VOC	
Facility emissions pre- project	108,856	387,332	134,136	154,808	178,701	
Facility emissions – post project	109,820	387,582	134,749	158,049	178,876	
Major Source Threshold	20,000	140,000	140,000	200,000	20,000	
Major Source?	yes	yes	no	no	yes	

As seen in the table above, the facility is an existing Major Source for NOx, CO, and VOC and is not becoming a Major Source for SOx and PM_{10} as a result of this project.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO ₂	voc	SO ₂	СО	PM	PM ₁₀
Estimated Facility PE before Project Increase	54	89	194	77	67	67*
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	N	N	N	N	N	N

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

6. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = PE1 for:

• Any unit located at a non-Major Source,

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

otherwise,

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

S-1114-140 & '-141:

Since these are new emissions units, BE = PE1 = 0 for all pollutants.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is not a major source for SOx or PM10, this project does not constitute an SB 288 major modification for these air contaminants.

Since this facility is a major source for NOx, SOx, and VOCs, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds						
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?			
NO _x	964	50,000	No			
SO _x	250	80,000	No			
VOC	0*	50,000	No			

^{*}increases of less than 0.5 lb/day (annual emissions/ 365) round to zero for NSR purposes.

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

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

Federal Major Modification Thresholds for Emission Increases						
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?			
NO _x	964*	0	Yes			
voc	0 (0.5 lb/day ~ 0)**	0	No			
PM ₁₀	613	30,000	No			
PM _{2.5}	613	20,000	No			
SO _x	250	80,000	No			

^{*}If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since there is an increase in NO_x, this project constitutes a Federal Major Modification. Federal Offset quantities are calculated below.

Federal Offset Quantities:

The Federal offset quantity is only calculated only for the pollutants for which the project is a Federal Major Modification. The Federal offset quantity is the sum of the annual emission changes for all new and modified emission units in a project calculated as the potential to emit after the modification (PE2) minus the actual emissions (AE) during the baseline period for each emission unit times the applicable federal offset ratio. There are no special calculations performed for units covered by an SLC.

NOx		Federal Offset Ratio	1.5
Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
S-1114-140	0	964	964
	Net	Emission Change (lb/year):	964
	Federal	Offset Quantity: (NEC * 1.5)	1,446

9. Rule 2410 - Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10

^{**}increases of less than 0.5 lb/day (annual emissions/365) round to zero for NSR purposes.

- Sulfuric acid mist
- Hydrogen sulfide (H2S)
- Total reduced sulfur (inlcuding H2S)
- Reduced sulfur compounds

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major S		terminatio ons/year)	n: Potentia	l to Emit		
	NO ₂	voc	SO ₂	CO	PM	PM ₁₀
Total PE from New and Modified Units	0.5	0	0.125	1.6	0.3	0.3
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	N	N	N	N	N	N

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

10. 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. The permit units are new and therefore QNEC = PE2/4.

VIII. COMPLIANCE

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,

- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

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

As seen in Section VII.C.2 above, the applicant is proposing to install a new heater treater with a PE greater than 2 lb/day for NO_x and CO. BACT is triggered for NO_x only (for the heater treater) since the PE is greater than 2 lb/day. However, BACT is not triggered for CO since the SSPE2 for CO is not greater than 200,000 lb/year, as demonstrated in Section VII.C.5 above.

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

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

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

As discussed in Section I above, there are no modified emissions units associated with this project. Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does constitute an Federal Major Modification for NO $_{\rm X}$ emissions. Therefore BACT is triggered for NO $_{\rm X}$ for all emissions units in the project for which there is an emission increase (heater treater).

2. BACT Guideline

Please note that BACT Guidelines 1.8.4 Heater Treater < 20 MMBtu/hr., natural gas-fired and 1.8.5 [Process Heater (non-refinery, < or = 20 MMBtu/hr.] have been rescinded and are replaced by the District Rule 4320 requirements for NOx.

3. Top-Down BACT Analysis

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

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

Pursuant to the attached Top-Down BACT Analysis (see **Attachment IV**), BACT has been satisfied with the following:

NOx: 9 ppmvd @ 3% O₂

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	СО	voc
SSPE2	109,820	387,582	134,749	158,049	178,876
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	Yes	Yes	No	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for NO_X only. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year for NO_x is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

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

Where,

PE2 = Post Project Potential to Emit, (lb/year)

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

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

otherwise.

The facility is proposing to install a new emissions unit heater treater; therefore BE = 0. Also, there is only one emissions unit associated with this project and there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

Offsets Required (lb/year) = ([PE2 - BE] + ICCE) x DOR

The project is a Federal Major Modification and therefore the correct offset ratio (DOR) for NO_x and VOCs is 1.5:1.

NOx

Assuming an offset ratio of 1.5:1, the amount of NO_x ERCs that need to be withdrawn is:

Offsets Required (lb/year) =
$$([964 - 0] + 0) \times 1.5$$

= 964×1.5
= $1,446$ lb NOx/year

Calculating the appropriate quarterly emissions to be offset is as follows:

As shown in the calculation above, the quarterly amount of offsets required for this project, when evenly distributed to each quarter, results in fractional pounds of offsets being required each quarter. Since offsets are required to be withdrawn as whole pounds, the quarterly amounts of offsets need to be adjusted to ensure the quarterly values sum to the total annual amount of offsets required.

To adjust the quarterly amount of offsets required, the fractional amount of offsets required in each quarter will be summed and redistributed to each quarter based on the number of days in each quarter. The redistribution is based on the Quarter 1 having the fewest days and the Quarters 3 and 4 having the most days. The redistribution method is summarized in the following table:

(w		n of Required Qua ual amount of offse	•	.z)
Value of z	Quarter 1	Quarter 2	Quarter 3	Quarter 4
.0	Y	Y	Y	Y
.25	Y	Y	Υ	Y+1
.5	Y	Y	Y+1	Y+1
.75	Y	Y+1	Y+1	Y+1

Therefore, the appropriate quarterly emissions to be offset are as follows:

1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	Total Annual
361	361	362	362	1,446

The applicant has stated that the facility plans to use ERC certificate S-4821-2 to offset the increases in NO_x emissions associated with this project. The above certificate has available quarterly NO_x credits as follows:

As seen above, the facility has sufficient credits to fully offset the quarterly NO_X emissions increases associated with this project.

SOx

Assuming an offset ratio of 1.5:1 (site of reduction > 15 miles from S-1114), the amount of SOx ERCs that need to be withdrawn is:

Offsets Required (lb/year) =
$$([250 - 0] + 0) \times 1.5$$

= 250 x 1.5
= 375 lb SOx/year

Calculating the appropriate quarterly emissions to be offset is as follows:

Therefore the appropriate quarterly emissions to be offset are as follows:

1st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	Total Annual
93	94	94	94	375

The applicant has stated that the facility plans to use ERC certificate S-4824-5 to offset the increases in SOx emissions associated with this project. The above certificate has available quarterly SOx credits as follows:

As seen above, the facility has sufficient credits to fully offset the quarterly SO_X emissions increases associated with this project.

<u>PM10</u>

Assuming an offset ratio of 1.5:1 (site of reduction > 15 miles from S-1114), the amount of SOx ERCs that need to be withdrawn is:

Offsets Required (lb/year) =
$$([613 - 0] + 0) \times 1.5$$

= 613×1.5
= $920 \text{ lb PM} \frac{10}{\text{year}}$

Calculating the appropriate quarterly emissions to be offset is as follows:

Therefore the appropriate quarterly emissions to be offset are as follows:

1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	Total Annual
230	230	230	230	920

The applicant has stated that the facility plans to use ERC certificate N-1409-4 to offset the increases in PM10 emissions associated with this project. The above certificate has available quarterly PM10 credits as follows:

As seen above, the facility has sufficient credits to fully offset the quarterly PM10 emissions increases associated with this project.

VOC

There are no VOC emissions expected from the new Wemco. The heater treater VOC emissions are 0.5 lb/day. Pursuant to District Policy APR 1130

"a <u>total project</u> annual emission increase (Σ [PE2 – PE1] for all units in the project) that <u>averages</u> less than or equal to 0.5 lb/day is rounded to zero (0) lb/day, only for the purposes of determining whether New and Modified Source Review (NSR) rule requirements are triggered."

Therefore, offsets are not required for VOCs.

Proposed Rule 2201 (offset) Conditions:

{GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 361 lb, 2nd quarter - 361 lb, 3rd quarter - 362 lb, and fourth quarter - 362 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

^{*}Rule 2201 Section 4.13.7 AER for PM that occurred from October through March, inclusive, may be used to offset increases in PM during any period of the year.

- ERC Certificate Number S-4821-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]
- {GC# 4447 edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender SO_x emission reduction credits for the following quantity of emissions: 1st quarter 93 lb, 2nd quarter 94 lb, 3rd quarter 94 lb, and fourth quarter 94 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- ERC Certificate Number S-4824-5 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]
- {GC# 4447 edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: 1st quarter 230 lb, 2nd quarter 230 lb, 3rd quarter 230 lb, and fourth quarter 230 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- ERC Certificate Number S-1409-4 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed,
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant, and/or
- e. Any project which results in a Title V significant permit modification

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

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

As demonstrated in Sections VII.C.7 and VII.C.8, this project is an SB 288 or Federal Major Modification. Therefore, public noticing for SB 288 or Federal Major Modification purposes is required.

b. PE > 100 lb/day

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

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds					
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?	
NO _x	108,856	109,820	20,000 lb/year	No	
SO _X	387,332	387,582	54,750 lb/year	No	
PM ₁₀	134,136	134,749	29,200 lb/year	No	
СО	154,808	158,049	200,000 lb/year	No	
VOC	178,701	178,876	20,000 lb/year	No	

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds						
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?	
NO _x	109,820	108,856	964	20,000 lb/year	No	
SO _x	387,582	387,332	250	20,000 lb/year	No	
PM ₁₀	134,749	134,136	613	20,000 lb/year	No	
СО	158,049	154,808	3,241	20,000 lb/year	No	
VOC	178,876	178,701	175	20,000 lb/year	No	

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V Significant Modification. Therefore, public noticing for Title V Significant Permit Modification is required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project which is a Title V Significant Modification. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

S-1114-140 (Heater Treater)

Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb SOX/MMBtu, 0.007 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.002 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4801]

The unit shall only be fired on gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 and 4320] Y

S-1114-141 (Wemco)

The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Y

Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

S-1114-140 & 141

The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Y

Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Y

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) are listed on the permit to operate:

The permittee shall keep accurate records of the date VOC sampling occurred, who performed the sampling and testing, and the results. [District Rule 2520] Y

All monitoring data, support information and records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Y

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to **Attachment V** of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NOx, CO, and SOx. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NOx, CO, or SOx.

The proposed location is in a non-attainment area for the state's PM_{10} as well as federal and state $PM_{2.5}$ thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM_{10} and $PM_{2.5}$.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Federal Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, this facility is a new major source and this project does constitute a Federal Major Modification, therefore this requirement is applicable. Seneca's compliance certification is included in **Attachment VI**.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install a heater treater and Wemco. Since the project will provide new equipment to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII.C.9 above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

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

The project is Federal Major Modification and therefore is also a Title V Significant Modification. 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. Included in **Attachment VI** is

Seneca's Title V Compliance Certification form. Continued compliance with this rule is expected.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. 40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Industrial Process heaters between 10 MMBtu/hr. and 100 MMBtu/hr.

This heater treater has a rating of 10 MMBtu/hr. and is fired on natural gas. Subpart Dc has no standards for gas-fired steam generators. Therefore, testing and monitoring requirements of subpart Dc do not apply.

Subpart Dc, subpart 60.48c requires the owner or operator of each affected facility to submit notification of the date of construction or reconstruction, anticipated startup, actual startup, as provided by Subpart A §60.7 of this part. Notification shall include

(1) The design heat input capacity of the facility and identification of the fuels to be combusted:

The designed heat input capacity and the identified fuels will be listed on the equipment description. No other permit conditions are required.

(2) If applicable, a copy of any federally enforceable requirements that limit the annual capacity factor for any fuel mixture of fuel under §60.42c or §60.43c.

The above requirement is not applicable since the unit is not subject to §60.42c or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

The facility has not proposed an annual capacity factor and one will not be imposed on the facility.

(4) Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c (a) or (b)1, unless the unit determination is made by the Administrator.

Section 60.48c(g) states that the owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day.

Since the unit has been evaluated assuming that it will consume the maximum amount of fuel allowed by the unit each day, the facility will not be required to record the daily fuel consumption.

Section 60.48c(i) states that all records required under this section shall be maintained by the owner operator of the affected facility for a period of two years following the date of such record. The ATCs require that records be kept for 5 years.

The following condition is included on the S-1114-140 ATC:

Permittee shall comply with all applicable testing, recordkeeping, and reporting requirements specified in Rule 4001 - New Source Performance Standards, including but not limited to Subparts A and Ja. [District Rule 4001] Y

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). As the steam generator is fired solely on natural gas, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. The following condition will be listed on the steam generator permit to ensure compliance:

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]

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. This facility wide permit for BPC contains the following condition:

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

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

The cancer risk for this project is shown below:

HRA Summary				
Unit	Cancer Risk	T-BACT Required		
S-1114-140-0	4.81 E -10	No		

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

The following special condition is required:

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

Rule 4201 Particulate Matter Concentration

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

F-Factor for NG: 8,578 dscf/MMBtu at 60 °F

PM10 Emission Factor: 0.0076 lb-PM10/MMBtu

Percentage of PM as PM10 in Exhaust: 100%

Exhaust Oxygen (O₂) Concentration: 3%

Excess Air Correction to F Factor = 20.9/(20.9 - 3) = 1.17

$$GL = \left(\frac{0.007 \ lb - PM}{MMBtu}\right) * \left(\frac{7,000 \ grain}{lb - PM}\right) / \left(\frac{8,578 \ ft^3}{MMBtu} * 1.17\right)$$

$$GL = 0.005 \ grain/dscf < 0.1 \ grain/dscf$$

Therefore, compliance with District Rule 4201 requirements is expected. Additionally, particulate matter emissions from the steam generator is already limited by Rule 2201 to a value less than or equal to the rule limit of 0.1 grain per cubic foot of gas at dry standard conditions. Therefore, the following condition, previously discussed, will ensure compliance with this rule:

Emission rates shall not exceed: NOx (as NOx): 9 ppmvd @ 3% O2 or 0.011 lb-NOx/MMBtu PM10: 0.007 lb/MMBtu; CO: 50 ppmvd @ 3% O2 or 0.037 lb-CO/MMBtu; or VOC: 0.002 lb/MMBtu. [District Rule 2201, 4305, 4306, and 4320] Y

Rule 4301 Fuel Burning Equipment

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

	District Rule 4301 Li	mits (lb/hr.)	
Pollutant	NO ₂	Total PM	SO ₂
S-1326-428-0	0.011 x 10 = 0.11	0.007x 10 0.07	0.00285 x 10 = 0.03
Rule Limit (lb/hr.)	140	10	200

The above table indicates compliance with the maximum lb/hr. emissions in this rule;

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

This rule provides equipment tuning procedures for boilers, steam generators and process heaters to control visible emissions and emissions of both nitrogen oxides (NOx) and carbon monoxide (CO).

This unit will follow District approved Alternate Monitoring scheme A, where the applicable emission limits are periodically monitored for compliance with Rule 4320 and is not required to perform tuning in accordance with the procedures of this Rule.

Rule 4305 Boilers, Steam Generators and Process Heaters - Phase II

This unit is natural gas-fired with a maximum heat input of 10 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the unit is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2.*

In addition, the unit is also subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3.*

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

Rule 4306 Boilers, Steam Generators and Process Heaters - Phase III

This unit is natural gas-fired with a maximum heat input of 10 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4306, the unit is subject to District Rule 4306.

In addition, the unit is also subject to District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr.

Since the 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 the requirements of District Rule 4306.

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

Section 5.2 NOx and CO Emission Limits

The 10 MMBtu/hr. process heater is subject to the following NOx limits in Table 2, as shown below.

The applicant has proposed to meet the standard schedule NOx emission limit.

Rule 4320 Emissions Limits					
Category	Operated on gaseous fuel		Operated on liquid fuel		
	NO _x Limit	CO Limit	NO _x Limit	CO Limit	
A. Units with a total rated heat input > 5.0 MMBtu/hr. to < 20.0 MMBtu/hr., except for Categories C through G units	a) Standard Schedule 9 ppmv or 0.011 lb/MMBtu; or b) Enhanced Schedule 6 ppmv or 0.007 lb/MMBtu	400 ppmv	40 ppmv or 0.052 lb/MMBtu	400 ppmv	

The proposed NO $_x$ emission factor is 9 ppmvd @ 3% O $_2$ (0.011 lb/MMBtu), and the proposed CO emission factor is 50 ppmvd @ 3% O $_2$ (0.074 lb/MMBtu).

Therefore, compliance with Section 5.2 of District Rule 4320 is expected.

A permit condition listing the emissions limits will be listed on permit as shown in the DEL section above.

Section 5.4 Particulate Matter Control Requirements

Section 5.4 of the rule requires one of four options for control of particulate matter: 1) combustion of PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases, 2) limit fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic, 3) install and properly operate an emission control system that reduces SO_2 emissions by at least 95% by weight; or limit exhaust SO_2 to

less than or equal to 9 ppmv corrected to 3.0% O2 or 4) 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.

The heater treater will only combust natural gas containing no more than 1 gr S/100 scf.

Section 5.6, Startup and Shutdown Provisions

Applicable emissions limits are not required during startup and shutdown provided. The duration of each start-up or each shutdown shall not exceed two hours, the emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown or operator has submitted an application for a Permit to Operate condition to allow more than two hours for each start-up or each shutdown provided the operator meets all of the conditions specified in Sections 5.6.3.1 through 5.6.3.3.

Startup and shutdown conditions have not been proposed.

Section 5.7, Monitoring Provisions

Section 5.7 requires either use of a APCO approved Continuous Emissions Monitoring System (CEMS) for NOx, CO, and oxygen, or implementation of an APCO-approved Alternate Monitoring System.

In order to satisfy the requirements of District Rule 4320, the applicant has proposed to use pre-approved alternate monitoring scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NOx, CO, and O₂ exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the permit in order to ensure compliance with the requirements of the proposed alternate monitoring plan:

{4063} The permittee shall monitor and record the stack concentration of NO_X, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]

{4064} If either the NO_X or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]

{4065} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

{4066} The permittee shall maintain records of: (1) the date and time of NO_X, CO, and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320]

5.7.6 Monitoring SOx Emissions

Section 5.7.6.1 Operators complying with Sections 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.

Section 5.7.6.2 Operators complying with Section 5.4.1.3 by installing and operating a control device with 95% SOx 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.

Section 5.7.6.3 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.

Heater treater shall only be fired on PUC-regulated natural gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rule 2201] Y

Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] N

Section 5.8 Compliance Determination

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

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

Section 5.8.2 requires that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. Therefore, the following permit condition will be listed on the permits as follows:

{2972} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320]

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

{2937} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320]

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

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

Section 6.1 Recordkeeping

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

All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320 and 40 CFR 60.48c(i)]

Section 6.2, Test Methods

Section 6.2 identifies test methods to be used when determining compliance with the rule. The following conditions will be listed on the permits:

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

The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities — EPA Method 2; Stack gas moisture content — EPA Method 4; SOx — EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content — EPA Method 11 or 15; and fuel hhv (MMBtu) — ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320]

Section 6.3, Compliance Testing

Section 6.3.1 requires that each unit subject to the requirements in Section 5.2 shall be source tested at least once every 12 months, except if two consecutive annual source tests demonstrate compliance, source testing may be performed every 36 months. If such a source test demonstrates non-compliance, source testing shall revert to every 12 months. The following conditions will be included in the permits:

A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320]

Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits,

the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306 and 4320]

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

Sections 6.3.2.1 through 6.3.2.7 address the requirements of group testing which is not proposed in this project. Therefore these sections are not applicable.

Conclusion

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

Rule 4623 Storage of Organic Liquids

This Rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored.

Section 5.1.1 specifies the VOC control system requirements. An operator shall not place, hold, or store organic liquid in any tank unless such tank is equipped with a VOC control system identified in Table 1. The specifications for the VOC control system are as follows:

Tank	TVP		
Capacity (Gallons)	0.5 psia to < 1.5 psia	1.5 psia to < 11 psia	≥11.0 psia
(Group A) 1,100 to 19,800	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system

VOC emissions from the Wemco will be controlled with a vapor recovery system listed on permit unit S-1114-78 with a control efficiency of at least 95%.

Section 5.6.1 requires fixed roof tanks with vapor recovery systems to be fully enclosed and maintained in a leak-free condition. The vapor recovery system shall consist of a closed system that collects all VOCs from the storage tank(s), and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall be one of the options listed in Sections 5.6.1.1 and 5.6.1.2. The following condition will be included on the ATC to ensure compliance:

The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. The efficiency of the vapor control system shall be at least 95%. [District Rules 2201 and 4623] Y

All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Y

A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] Y

Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Y

Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Y

All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Y

Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Y

Section 6.0 specifies the administrative requirements of this rule, including inspection and recordkeeping requirements. An inspection log must be maintained as stated by the following:

Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection [District Rules 2201 and 4623] Y

Compliance with the requirements of 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.

The 10 MMBtu/hr. heater treater will be fired on natural gas containing no more than 1 gr S/100 scf and therefore compliance is expected.

Therefore, compliance with District Rule 4801 requirements is expected.

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.

Greenhouse Gas (GHG) Significance Determination

District is a Responsible Agency

Oil and gas operations in Kern County must comply with the *Kem County Zoning Ordinance – 2015 (C) Focused on Oil and Gas Local Permitting.* In 2015, Kern County revised the Kern County Zoning Ordinance Focused on Oil and Gas Activities (Kern Oil and Gas Zoning Ordinance) in regards to future oil and gas exploration, and drilling and production of hydrocarbon resource projects occurring within Kern County.

Kern County served as lead agency for the revision to their ordinance under the California Environmental Quality Act (CEQA), and prepared an Environmental Impact Report (EIR) that was certified on November 9, 2015. The EIR evaluated and disclosed to the public the environmental impacts associated with the growth of oil and gas exploration in Kern County, and determined that such growth will result in significant GHG impacts in the San Joaquin Valley. As such, the EIR included mitigation measures for GHG.

The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381). As a Responsible Agency, the District is limited to mitigating or avoiding impacts for which it has statutory authority. The District does not have statutory authority for regulating GHGs. The District has determined that the applicant is responsible for implementing GHG mitigation measures imposed in the EIR by the Kern County for the Kern County Zoning Ordinance.

District CEQA Findings

The proposed project is located in Kern County and is thus subject to the Kern County Zoning Ordinance – 2015 (C) Focused on Oil and Gas Local Permitting. The Kern County Zoning Ordinance was developed by the Kern County Planning Agency as a

comprehensive set of goals, objectives, policies, and standards to guide development, expansion, and operation of oil and gas exploration within Kern County.

In 2015, Kern County revised their *Kern County Zoning Ordinance* in regards to exploration, drilling and production of hydrocarbon resources projects. Kern County served as lead agency for the revision to their ordinance under the California Environmental Quality Act (CEQA), and prepared an Environmental Impact Report (EIR) that was certified on November 9, 2015. The revised Kern County Zoning Ordinance establishes a written process (Conformity Review permit process or Minor Activity permit) by which oil and gas exploration projects involving site-specific operations can be evaluated to determine whether the environmental effects of the operation were covered in the *Kem County Zoning Ordinance* EIR.

For stationary source emissions that are below the offset threshold, i.e. not required to surrender ERCs, and for non-stationary source emissions, Kern County entered into an Oil and Gas Emission Reduction Agreement (Oil and Gas ERA) with the District pursuant to the EIR. Per the Oil and Gas ERA, the applicant shall fully mitigate project emissions that are not required to be offset by District permit rules and regulations. Such mitigation can be achieved through any of the three options: (1) the applicants pay an air quality mitigation fee with each Oil and Gas Conformity Review permit issued by the Kern County, (2) the applicants may develop and propose to implement their own emission reduction projects instead of paying all or part of the mitigation fee, or (3) the applicants will be allowed to enter into an agreement directly with the District (if approved by Kern County) to develop an alternative fee schedule.

Kern County, as the lead agency, is the agency that will enforce the mitigation measures identified the EIR, including the mitigation requirements of the Oil and Gas ERA. As a responsible agency the District complies with CEQA by considering the EIR prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project involved (CCR §15096). The District has reviewed the EIR prepared by Kern County, the Lead Agency for the project, and finds it to be adequate. To reduce project related impacts on air quality, the District evaluates emission controls for the project such as Best Available Control Technology (BACT) under District Rule 2201 (New and Modified Stationary Source Review). In addition, the District is requiring the applicant to surrender emission reduction credits (ERC) for stationary source emissions above the offset threshold.

Thus, the District concludes that through a combination of project design elements, permit conditions, and the Oil and Gas ERA, the project will be fully mitigated to result in no net increase in emissions. Pursuant to CCR §15096, prior to project approval and issuance of ATCs the District prepared findings.

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular

project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The revision to the *Kem County Zoning Ordinance* went through an extensive public process that included a Notice of Preparation, a preparation of an EIR, scoping meetings, and public hearings. The process led to the certification of the final EIR and approval of the revised *Kem County Zoning Ordinance* in November 2015 by the Kern County Board of Supervisors. As mentioned above, the proposed project will be fully mitigated and will result in no net increase in emissions. In addition, the proposed project is not located at a facility of concern; therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Pending a successful EPA/COC review period, issue Authority to Construct S-1114-78-9, '-420-0 and '-421-0 subject to the permit conditions on the attached draft Authorities to Construct in **Attachment VII**.

X. BILLING INFORMATION

Annual Permit Fees					
Permit Number	Fee Schedule	Fee Description	Annual Fee		
S-1114-78	3020-05E	210,000 gallons	\$270.00		
S-1114-420	3020-02-G	10 MMBtu/hr.	\$ 893.00		
S-1114-421	3020-05A	68.4 bbl, 2,873 gallons	\$ 83.00		

Attachments

I: Current PTO

II: Manufacturer Details

III: Emission Profiles

IV: BACT Analysis

V: HRA/AAQA

VI: Title V Compliance Certification Form and Statewide Compliance Statement

VII: Draft ATC

ATTACHMENT I Current PTO

PERMIT UNIT: S-1114-78-7

EXPIRATION DATE: 02/28/2022

SECTION: 15 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF FREE WATER KNOCKOUT TANK T-1 W/VAPOR CONTROL SYSTEM INCLUDING HEAT EXCHANGER, LIQUID KNOCKOUT VESSELS, & VAPOR COMPRESSOR WITH PIPING TO STEAM GENERATOR S-1114-74, HEATER TREATERS S-1114-83 & 84, AND SERVING TANKS S-1114-78,79,80,81,82,85,86,87,104,105 AND 106 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

- 1. Vapor space pressure in tanks shall be controlled by gas blanketing system. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. PUC-quality, PUC-regulated, inert gas or equivalent shall be used as blanketing gas. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
- All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623]
 Federally Enforceable Through Title V Permit
- 5. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. A liquid leak is defined as an organic liquid drip rate of more than three drops per minute and such a rate is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
- 6. Any tank gauging or sampling device on a tank vented to the vapor control system shall be maintained to be leak-free and the cover shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
- 7. Except as otherwise provided in this permit, the permittee shall ensure that the vapor control system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The same component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623] Federally Enforceable Through Title V Permit
- 9. Permittee shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520] Federally Enforceable Through Title V Permit

Facility Name: SENECA RESOURCES Location: HEAVY OIL WESTERN, CA 9-1114-78-7: Jun 8 2017 1:44PM — EDGEMILR

- 10. The VOC content of the gas in the vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. Permittee shall conduct quarterly gas sampling for gas leaving the tank's vapor space. If the VOC content of the gas sample is equal to or less than 10% VOC by weight for 8 consecutive quarterly samples, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. Permittee shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Permittee shall also visually or ultrasonically inspect, as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
- 13. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
- 14. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
- 15. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
- 16. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
- 17. If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
- 18. The permittee shall keep accurate records of the date VOC sampling occurred, who performed the sampling and testing, and the results. [District Rule 2520] Federally Enforceable Through Title V Permit
- 19. All monitoring data, support information and records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

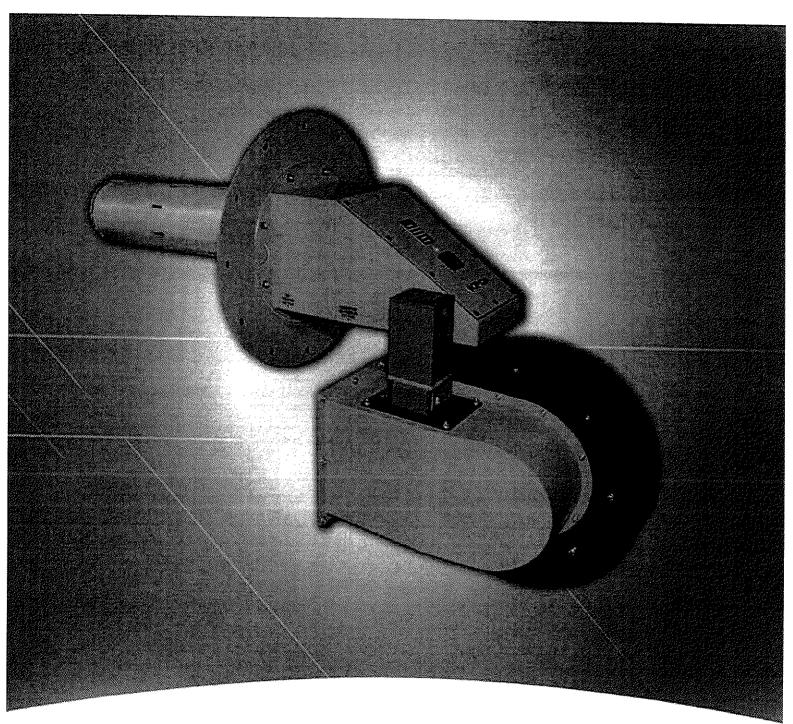
Facility Name: SENECA RESOURCES Location: HEAVY OIL WESTERN, CA 8-1114-78-7: Jun 8 2017 1:44PM - EDGEMLR

ATTACHMENT II Manufacturer Information

MAXON XPO™

Ultra low NOx indirect burner

Honeywell



Technical Catalog

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FEATURES & BENEFITS

- · Low temperature burner for use with clean fuel gases
- · Single digit NOx emissions at 30% excess air
- · High efficiency with low excess air requirements
- · Capacities up to 2340 kW with a least 3:1 turndown ratio
- · For use in indirect fired solution backed heaters

PRODUCT DESCRIPTION

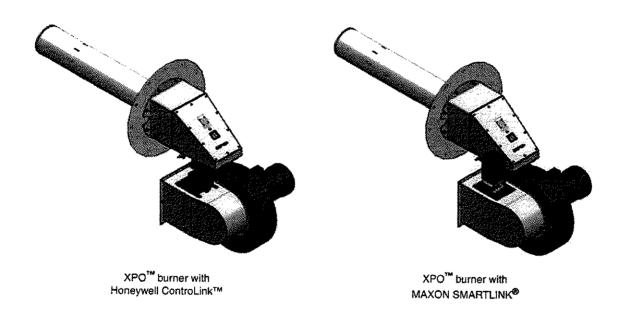
Maxon XPO™ burners are low temperature burners for use in liquid backed applications. They provide high efficiency operation with low excess air requirements and are designed for ease of retrofitting into existing liquid backed applications.

XPO™ burners are available in two basic versions:

- Packaged (PB) with integral combustion air blower
- External blower (EB) for use with an external combustion air source for extended capacities

Both packaged (PB) and external blower (EB) versions include two different choices for blast tube lengths. A 610 mm or 1220 mm long blast tube is available. Blast tube length should be selected based on the wall penetration depth or non-liquid cooled portion of fire tube.

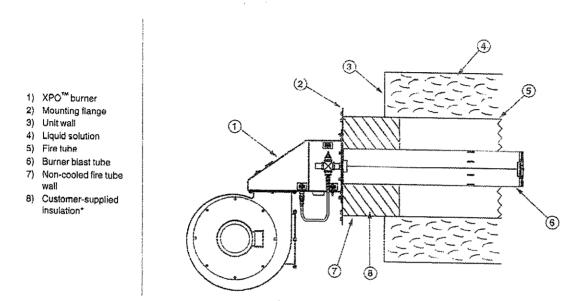
The packaged (PB) version also includes a choice of blower voltage and a choice of air/fuel ratio control actuators. MAXON requires the use of parallel positioning control systems. For indoor, general purpose installations, use Honeywell ControLink™ or equivalent system. For outdoor or hazardous duty service installations, use MAXON SMARTLINK® MRV control systems.



TYPICAL APPLICATIONS

MAXON XPO[™] burners are low temperature burners for use in liquid backed applications, including

- Water back heater
- Fire tube boiler
- Thermal oil heater
- Direct contact water heater
- · Solution heating/tanks
- Snow melters



^{*}All non-liquid cooled surfaces must be insulated as shown above.

TYPICAL EMISSIONS

XPO™ burner will achieve ultra low NOx emissions while operating at 30% excess air level.

Exact emissions performance may vary in your application. Contact MAXON for information on installation specific estimates or guarantees. No guarantee of emissions is intended or implied without specific written guarantee from MAXON.

2

ATTACHMENT III Emission Profiles

Permit #: S-1114-78-9

Last Updated

Facility: SENECA

06/08/2017 EDGEHILR

RESOURCES

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>sox</u>	<u>PM10</u>	CO	voc
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	0.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.0
Quarterly Net Emissions Change (lb/Qtr)	,				
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1114-140-0

Last Updated

Facility: SENECA RESOURCES

05/25/2017 EDGEHILR

Equipment Pre-Baselined: NO

mprincing includes and	<u>NOX</u>	<u>sox</u>	PM10	CO	<u>voc</u>
Potential to Emit (lb/Yr):	964.0	250.0	613.0	3241.0	175.0
Daily Emis. Limit (lb/Day)	2.6	0.7	1.7	8.9	0.5
Quarterly Net Emissions Change (lb/Qtr)	***************************************				··-
Q1:	241.0	62.0	153.0	810.0	43.0
Q2:	241.0	62.0	153.0	810.0	44.0
Q3;	241.0	63.0	153,0	810.0	44.0
Q4:	241.0	63.0	154.0	811.0	44.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5	1.5	1.5		
Quarterly Offset Amounts (lb/Qtr)					
Q1; \	361.0	93.0	230.0		
Q2:	361.0	94.0	230.0		
Q3:	362.0	94.0	230.0		
Q4:	362.0	94.0	230.0		

Permit #: S-1114-141-0

Last Updated

Facility: SENECA RESOURCES

05/30/2017 **EDGEHILR**

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>sox</u>	PM10	<u>co</u>	<u>voc</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	0.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					40 /414
Quarterly Offset Amounts (lb/Qtr)	***************************************				
Q1:					
Q2:					**************************************
Q3;					
Q4:					

ATTACHMENT IV BACT Analysis

Top Down BACT Analysis for NOx Emissions:

District Rule 4320 includes a compliance option that limits units greater than 5 MMBtu/hr and less than 20 MMBtu/hr to $\frac{9 \text{ ppm} \ @ \ 3\% \ O_2}{2}$. This emission limit is achieved in Practice control technology for the BACT analysis. District Rule 4320 also contains an enhanced schedule option that allows applicants additional time to meet the requirements of the rule. The enhanced schedule NOx emission limit requirement is $\frac{6 \text{ ppmv} \ @ \ 3\% \ O_2}{2}$. Since this is an enhanced option in the rule, it will be considered the Technologically Feasible control technology for the BACT analysis.

The following are possible control technologies:

- 1. 9 ppmvd @ 3% O2 Achieved in Practice.
- 2. 6 ppmvd @ 3% O2 with SCR Technologically Feasible

Step 2 - Eliminate Technologically Infeasible Options

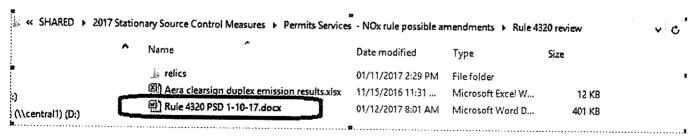
None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

- 1. 9 ppmvd @ 3% O2 Achieved in Practice.
- 2. 6 ppmvd @ 3% O2 with SCR Technologically Feasible

Step 4 - Cost Effectiveness Analysis

A cost effective analysis is required for Technologically Feasible Control Options that are not proposed. The estimated cost of SCR was obtained from the following:



SCR System Cost

R.F. MacDonald Co (Contact: Rob Schmitz, (209) 595-5523)

Budgetary estimates for an SCR system, which includes ammonia injection grid, air dilution and ammonia flow control skid, reactor housing, transition and catalyst, for various size boilers are summarized in the following table. The estimates **do not** include installation cost,

freight expenses and sales tax (no tax on installation labor). The vendor stated that the **installation costs are roughly around 50% of the equipment cost**. The estimates are for anhydrous ammonia bottle skids. The cost would be \$100,000 more for installations that needs urea to ammonia conversion system (for example, correctional institutions).

Boiler Size	SCR System Equipment Cost (\$)			
≤ 20 MMBtu/hr	\$150,000			
50 MMBtu/hr – 100 MMBtu/hr	\$180,000			
>100 MMBtu/hr (Custom)	\$200,000-\$250,000			

^{*}SCR systems using anhydrous ammonia bottle skids

Therefore the estimated SCR installation cost is \$225,000. It is assumed that the cost of SCR for a small boiler is comparable to that of a heater treater.

Annualized Capital Cost

Equivalent Annual Capital Cost (Capital Recovery)

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

A = Equivalent Annual Control Equipment Capital Cost

P = Present value of the control equipment, including installation cost

i = interest rate (use 10%, or demonstrate why alternate is more representative of the specific operation).

 n = equipment life (assume 10 years or demonstrate why alternate is more representative of the specific operation)

Where

P = \$225,000 (assuming the lower of range values is applicable for a 10 MMBtu/hr unit , conservative)

i = 10%,

n = 10 years

 $A = 0.1627 \times 225,000$ = \$36,616/yr

Industrial Standard NOx Emissions = 10 MMBtu/hr x 0.018 lb/MMBtu x 8760 hrs/year = 1,577 lb/year

Tech. Feasible NO_x Emissions = 10 MMBtu/hr x 0.007 lb/MMBtu x 8760 hrs/year = 613 lb/year

NOx reduction due to SCR:

Total reduction = Emissions (15 ppmv) — Emissions (6 ppmv) Total reduction = (1,577 lb/yr – 613 lb/yr)/2000 lb/ton Total reduction = 0.5 ton/yr

Cost effectiveness

Cost effectiveness = \$ 36,616/yr/ 0.5 ton/yr Cost effectiveness = \$ 73,232/ton NOx

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

Step 5 - Select BACT

BACT is satisfied by the applicant's proposal to meet a NOx limit of 9 ppmvd @ $3\% O_2$ to be achieved with a low NO_x burner.

ATTACHMENT V HRA/AAQA

San Joaquin Valley Air Pollution Control District Risk Management Review

To:

Richard Edgehill - Permit Services

From:

Seth Lane - Technical Services

Date:

June 27, 2017

Facility Name:

Seneca Resources

Location:

T31S, R22E, Section 15

Application #(s):

S-1114-140-0 & 141-0

Project #:

S-1171563

A. RMR SUMMARY

		RMF	R Summar	У	*************************************	
Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required?	Special Permit Requirements?
Unit 78-9	N/A	N/A	N/A	N/A	No	No
Unit 140-0 (Heater Treater)	0.00	0.00	0.00	4.81E-10	No	No
Unit 141-0 (WEMCO)	N/A	N/A	N/A	N/A	No	No
Project Totals	0.00	0.0	0.0	4.81E-10	716-0-4780-080-08070	
Facility Totals	>1	0.15	0.12	1.07E-05		

Proposed Permit Requirements

To ensure that human health risks will not exceed District allowable levels; the following shall be included as requirements for:

Unit # 78-9 & 141-0

No special requirements are required.

Unit # 140-0

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.

B. RMR REPORT

I. Project Description

Technical Services received a request on June 8, 2017, to perform a Risk Management Review for a proposed installation of a new heater treater and Wemco connected to existing vapor control system S-1114-77.

II. Analysis

Toxic emission factors for this unit were derived from data in the 1992 Radian Corporation report to WSPA, and input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines. The prioritization score for this proposed facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required. The AERMOD model was used, with the parameters outlined below and meteorological data for 2004-2008 from Fellows to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

Unit 78-9 & 141-0 were not modeled, because the engineer stated there are no VOC emissions associated with these units.

The following parameters were used for the review:

Analysis Parameters Unit 140-0							
Source Type	Point	Location Type	Rural				
Stack Height (m)	7.62	Closest Receptor (m)	411				
Stack Diameter. (m)	0.76	Type of Receptor	Business				
Stack Exit Velocity (m/s)	0.69	Max Hours per Year	8760				
Stack Exit Temp. (°K)	430.22	Fuel Type	NG				
Fuel Usage (mmscf/hr)	0.01	Fuel Usage (mmscf/yr)	3.65				

Technical Services performed modeling for criteria pollutants CO, NO_x, SO_x, and PM10 with the emission rates below:

Unit#	NO _x ((Lbs.)	SO _x (Lbs.) CO (Lbs.)		PM ₁₀ (Lbs.)			
	Hr.	Yr.	Hr.	Yг.	Hr.	Yr.	Hr.	Yr.
140-0	0.11	964	0.03	250	0.37	3,241	0.07	613

Seneca Resources, S-1171563 Page 3 of 3

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

	Background Site	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Turlock (2015)	Pass	X	Pass	X	X
NOx	Turlock (2015)	Pass ¹	X	X	X	Pass
SOx	Fresno – Garland (2015)	Pass	Pass	X	Pass	Pass
PM ₁₀	Turlock (2015)	Х	X	X	Pass ²	Pass ²
PM _{2.5}	Turlock (2015)	Х	X	Х	Pass ³	Pass ³

¹The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million. In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).

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

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Prioritization score w/ toxic emissions summary
- D. Facility Summary
- E. AAQA Report

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

³The court has vacated EPA's PM_{2.5} SILs. Until such time as new SIL values are approved, the District will use the corresponding PM₁₀ SILs for both PM₁₀ and PM_{2.5} analyses.

ATTACHMENT VI Statewide Compliance Statement Title V Compliance Certification Form

San Joaquin Valley

Unified Air Pollution Control District DETERMINATION OF COMPLIANCE STATEMENT

Company Name: Seneca Resources Facility ID(s) S-X: 1114; 3007; 3755; 4159

All major Stationary Source(s) owned or operated by Seneca Resources in California that are subject to emission limitations are in compliance or on a schedule for compliance with all applicable emission limitations and standards.

Signature of Responsible Official

Date

Timothy R. Alburger

Name of Responsible Official (please print)

Senior Advisor, EHSQ

Title of Responsible Official (please print)

Deliver to:

San Joaquin Valley Unified Air Pollution Control District 34946 Flyover Court Bakersfield, CA 93308





TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)
☐ ADMINISTRATIVE AMENDMENT ☐ MINOR MODIFICATION ☐ SIGNIFICANT MODIFICATION
COMPANY NAME: Seneca Resources FACILITY ID: S-1114
1. Type of Organization: Corporation Sole Ownership Government Partnership Utility
2. Owner's Name:
3. Agent to the Owner:
II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial applicable circles for confirmation): Based on information and belief formed after reasonable inquiry, the equipment identified in this application will contint to comply with the applicable federal requirement(s). Based on information and belief formed after reasonable inquiry, the equipment identified in this application will complete with applicable federal requirement(s) that will become effective during the permit term, on a timely basis. Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted. Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true, accurate, and complete. For minor modifications, this application meets the criteria for use of minor permit modification procedures pursuant to District Rule 2520.
I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:
Ob Ab 1
Signature of Responsible Official Date
Timothy B Alburgar
Timothy R. Alburger Name of Responsible Official (please print)
Senior Advisor, EHSQ Title of Responsible Official (please print)
rice of responsible official (blease blint)

ATTACHMENT VII Draft ATC

AUTHORITY TO CONSTRUCT

ISSU

PERMIT NO: S-1114-78-9

LEGAL OWNER OR OPERATOR: SENECA RESOURCES

MAILING ADDRESS:

4800 CORPORATE CT

BAKERSFIELD, CA 93311

LOCATION:

HEAVY OIL WESTERN

CA

SECTION: 15 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 5,000 BBL FIXED ROOF FREE WATER KNOCKOUT TANK T-1 W/VAPOR CONTROL SYSTEM INCLUDING HEAT EXCHANGER, LIQUID KNOCKOUT VESSELS, & VAPOR COMPRESSOR WITH PIPING TO STEAM GENERATOR S-1114-74, HEATER TREATERS S-1114-83 & 84, AND SERVING TANKS S-1114-78,79,80,81,82,85,86,87,104,105 AND 106 (MIDWAY SUNSET FIELD 15A TANK BATTERY): CONNECT HEATER TREATER S-1114-140 AND WEMCO S-1114-141 TO VAPOR CONTROL SYSTEM

CONDITIONS

- {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. Vapor space pressure in tanks shall be controlled by gas blanketing system. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. PUC-quality, PUC-regulated, inert gas or equivalent shall be used as blanketing gas. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Directory APCO

- 5. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
- 6. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
- 7. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. A liquid leak is defined as an organic liquid drip rate of more than three drops per minute and such a rate is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
- 8. Any tank gauging or sampling device on a tank vented to the vapor control system shall be maintained to be leak-free and the cover shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
- 9. Except as otherwise provided in this permit, the permittee shall ensure that the vapor control system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The same component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623] Federally Enforceable Through Title V Permit
- 11. Permittee shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520] Federally Enforceable Through Title V Permit
- 12. The VOC content of the gas in the vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. Permittee shall conduct quarterly gas sampling for gas leaving the tank's vapor space. If the VOC content of the gas sample is equal to or less than 10% VOC by weight for 8 consecutive quarterly samples, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. Permittee shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Permittee shall also visually or ultrasonically inspect, as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
- 15. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
- 16. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit.

- 17. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
- 18. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
- 19. If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
- 20. The permittee shall keep accurate records of the date VOC sampling occurred, who performed the sampling and testing, and the results. [District Rule 2520] Federally Enforceable Through Title V Permit
- 21. All monitoring data, support information and records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1114-140-0

LEGAL OWNER OR OPERATOR: SENECA RESOURCES

MAILING ADDRESS:

SENECA RESOURCES
4800 CORPORATE CT

BAKERSFIELD, CA 93311

LOCATION:

HEAVY OIL WESTERN

ÇA

EQUIPMENT DESCRIPTION:

10 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER WITH TWO SEPARATE 5.0 MMBTU/HR LOX NOX BURNERS

CONDITIONS

- {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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOX emission reduction credits for the following quantity of emissions: 1st quarter 361 lb, 2nd quarter 361 lb, 3rd quarter 362 lb, and fourth quarter 362 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. ERC Certificate Number S-4821-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [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-ether governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

Arnaud Marjollel, Director of Permit Services \$-1114-140-0: Jun 8 2017 2 30PM - EDGEHILR: Joint Inspection NOT Required

- 5. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOX emission reduction credits for the following quantity of emissions: 1st quarter 93 lb, 2nd quarter 94 lb, 3rd quarter 94 lb, and fourth quarter 94 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. ERC Certificate Number S-4824-5 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
- 7. Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: 1st quarter 230 lb, 2nd quarter 230 lb, 3rd quarter 230 lb, and fourth quarter 230 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. ERC Certificate Number S-1409-4 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
- 9. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- 10. 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, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
- 11. Heater treater shall only be fired on PUC-regulated natural gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. Emission rates shall not exceed: NOx (as NOx): 9 ppmvd @ 3% O2 or 0.011 lb-NOx/MMBtu PM10: 0.007 lb/MMBtu; CO: 50 ppmvd @ 3% O2 or 0.037 lb-CO/MMBtu; or VOC: 0.002 lb/MMBtu. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
- 13. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
- 16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 17. 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 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

- 18. The following test methods shall be used: NOX (ppmv) EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) EPA Method 19; CO (ppmv) EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) EPA Method 3 or 3A or ARB Method 100; stack gas velocities EPA Method 2; Stack gas moisture content EPA Method 4; SOx EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content EPA Method 11 or 15; and fuel hhv (MMBtu) ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 2201, 4305, 4306, 4320] Federally Enforceable Through Title V Permit
- 19. 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
- 20. 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
- 21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
- 22. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
- 23. All NOx, CO, and O2 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 NOx, CO, and O2 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 sample 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 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
- 24. 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
- 25. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
- 26. 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 PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, termissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

- 27. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
- 28. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
- 29. Permittee shall maintain accurate records of valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts used to satisfy the fuel sulfur content analysis of fuel combusted in process heater, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
- 30. The permittee shall keep accurate records of the date VOC sampling occurred, who performed the sampling and testing, and the results. [District Rule 2520] Federally Enforceable Through Title V Permit
- 31. Permittee shall comply with all applicable testing, recordkeeping, and reporting requirements specified in Rule 4001 New Source Performance Standards, including but not limited to Subparts A and Ja. [District Rule 4001] Federally Enforceable Through Title V Permit
- 32. All monitoring data, support information and records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1114-141-0

LEGAL OWNER OR OPERATOR: SENECA RESOURCES

MAILING ADDRESS:

SENECA RESOURCES
4800 CORPORATE CT

BAKERSFIELD, CA 93311

LOCATION:

HEAVY OIL WESTERN

CA

EQUIPMENT DESCRIPTION:

WEMCO UNIT WITH VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1114-78

CONDITIONS

- {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
- {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
- 3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
- 5. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. The efficiency of the vapor control system shall be at least 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
- 6. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] 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 exper governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

Arnaud Marjollet Director of Permit Services S-1114-141-0: Jun 8 2017 1:44PM - EDGEHILR: Joint Inspection NOT Required

- 7. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
- 8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
- 9. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
- 11. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
- 12. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
- 14. The permittee shall keep accurate records of the date VOC sampling occurred, who performed the sampling and testing, and the results. [District Rule 2520] Federally Enforceable Through Title V Permit
- 15. All monitoring data, support information and records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

