San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAY 0 6 2019

Ms. Charlotte Campbell
California Resources Production Corp
11109 River Run Blvd.
Bakersfield, CA 93311

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
Facility Number: S-8452
Project Number: S-1190921

Dear Ms. Campbell:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The application is for two heater treaters.

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

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

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Enclosures

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

Samir Sheikh
Executive Director/Air Pollution Control Officer

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

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

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

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San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review

Facility Name:	California Resources Production Corp	Date:	4/29/19
Mailing Address:	11109 River Run Blvd. Bakersfield, CA 93311	Engineer:	David Torii
		Lead Engineer:	Rich Karrs
Contact Person:	Charlotte Campbell		
Telephone:	661.529.4323		
Application #(s):	S-8452-101-0 and '102-0		
Project #:	1190921		
Deemed Complete:	3/6/19		

I. Proposal

California Resources Production Corp. (CRPC) has requested Authority to Construct (ATC) permits to add one additional 5 MMBtu/hr burner to each of PEER boiler S-8452-1 and PEER process heater S-8452-5. Note that PEERs S-8452-1 and '5 are actually heater treaters (HTs) and not a boiler (S-8452-1) or a process heater (S-8452-5) as indicated on their Equipment Descriptions. The proposed HTs will each have two burners as shown below in section V.

As PEER units are exempt from permitting, the proposed HTs will be evaluated as new units.

CRPC received has their Title V Permit. This modification can be classified as a Title V significant modification pursuant to Rule 2520, 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. CRPC must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4305	Boilers, Steam Generators, and Process Heaters – Phase 2 (8/21/03)
Rule 4306	Boilers, Steam Generators, and Process Heaters – Phase 3 (10/16/08)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
Rule 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 HTs will be located in the Mt. Poso Oil Field, within the Section 9, Township 27 S, Range 28 E in CRPC's Heavy Oil Central stationary source. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

The HTs will use field gas to heat crude oil to facilitate its separation into oil and water. The HTs are each use a 750 bbl vessel to contain the heated crude oil. Note that the HTs will not be used to separate gas/vapors from the liquid. Furthermore, the vessels only vent gas/vapors during emergency situations to prevent damage to the vessels; therefore, the vessels are permit exempt pursuant to section 6.14 of Rule 2020 and are listed on the permit pursuant to 6.14 of Rule 2020.

V. Equipment Listing

PEERs (see Appendix B):

PEER S-8452-1: 4.2 MMBTU/HR NATURAL GAS-FIRED BOILER WITH A LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) (VPC 17)

Note that S-8452-1's burner is a Maxon XPO model

PEER S-8452-5: 4.99 MMBTU/HR MAXON MODEL XPO 4 PB NATURAL GAS-FIRED PROCESS HEATER WITH A MAXON MODEL XPO 4 PB LOW NOX BURNER

Proposed ATCs:

S-8452-101-0: 9.2 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER WITH ONE 4.2 MMBTU/HR MAXON XPO BURNER AND A SEPARATE 5.0 MMBUT/HR MAXON M-PAKT (OR EQUIVALENT) LOW NOX BURNER AND A PERMIT-EXEMPT 750 BBL PRESSURE VESSEL

S-8452-102-0: 10.0 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER WITH ONE MAXON XPO 5.0 MMBTU/HR BURNER AND A SEPARATE 5.0 MMBTU/HR MAXON M-PAKT (OR EQUIVALENT) LOW NOX BURNER AND A PERMIT-EXEMPT 750 BBL PRESSURE VESSEL

VI. Emission Control Technology Evaluation

Low-NO_x burners reduce NO_x formation by producing lower flame temperatures (and longer flames) than conventional burners. Conventional burners thoroughly mix all the fuel and air in a single stage just prior to combustion, whereas low-NO_x burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen

to produce thermal 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 minimized.

Sulfur Control

The gas combusted contain no more than 2.9 gr S/100 scf.

VII. General Calculations

A. Assumptions

- PEERs S-8452-1 and '5 are exempt from permitting and are therefore not included in calculations
- The maximum operating schedule is 24 hours per day
- The units is fired solely on natural gas, TEOR and field gas (proposed)
- Annual potential to emit is calculated based on 8,760 hours of operation per year (proposed)
- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)
- Gas sulfur content: 2.9 gr/100 scf (proposed)

B. Emission Factors

Pollutant	Post-Project Emission Factors (EF2)		Source
NO_X	0.011 lb-NO_X/MMBtu	9 ppmvd NO_X @ 3% O_2	Rule 4320 and BACT
SO_X	0.00829 lb-SO_X/MMBtu*	2.9 gr-S/100 scf	Proposed
PM10	0.0076 lb-PM10/MMBtu		Proposed and AP-42 (07/98) Table 1.4-2
CO	0.037 lb-CO/MMBtu	50 ppmvd CO @ 3% O_2	Proposed
VOC	0.0055 lb-VOC/MMBtu		AP-42 (07/98) Table 1.4-2

$$* \frac{2.9\ grain\ S}{100\ scf} x \frac{2\ grain\ SO_2}{grain\ S} x \frac{1\ lb}{7{,}000\ grain} x \frac{1\ scf}{1{,}000\ Btu} x \frac{1{,}000{,}000}{MM} = 0.00829 \frac{lb\ SO_2}{MMBtu}$$

C. Calculations

1. Pre-Project Potential to Emit (PE1)

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

2. Post Project Potential to Emit (PE2)

The potential to emit for each HT is calculated as follows, and summarized in the table below:

S-8452-101-0:

$PE2_{NOx}$ = (0.011 lb/MMBtu) * (9.2 MMBtu/hr) * (24 hr/day)
= 2.6 lb NOx/day

= (0.011 lb/MMBtu) * (9.2 MMBtu/hr) * (24 hr/day) * (365 day/year)
= 964 lb NOx/year

S-8452-102-0:

$PE2_{NOx}$ = (0.011 lb/MMBtu) * (10 MMBtu/hr) * (24 hr/day)
= 2.6 lb NOx/day

= (0.011 lb/MMBtu) * (10 MMBtu/hr) * (24 hr/day) * (365 day/year)
= 964 lb NOx/year

PE2 S-8452-101-0		
Pollutant	**Daily Emissions (lb/day)**	**Annual Emissions (lb/year)**
NOx	2.4	887
SOx	1.8	668
PM_{10}	1.7	612
CO	8.2	2,982
VOC	1.2	443

PE2 S-8452-102-0		
Pollutant	**Daily Emissions (lb/day)**	**Annual Emissions (lb/year)**
NOx	2.6	964
SOx	2.0	726
PM_{10}	1.8	666
CO	8.9	3,241
VOC	1.3	482

PE2 Total Annual Emissions (lb/year)			
Pollutant	**S-8452-101-0**	**S-8452-102-0**	**Total**
NOx	887	964	1,851
SOx	668	726	1,394
PM_{10}	612	666	1,278
CO	2,982	3,241	6,223
VOC	443	482	925

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.

Facility emissions are already above the Offset and Major Source Thresholds for all pollutants; therefore, SSPE1 calculations are not necessary.

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.

Facility emissions are already above the Offset and Major Source Thresholds for all pollutants; therefore, SSPE2 calculations are not necessary.

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

This source is an existing Major Source for all pollutants and will remain so. No change in other pollutants are proposed or expected 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)(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	CO	PM	PM_{10}
Estimated Facility PE before Project Increase				>250		
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source?				Y		

As shown above, the facility is an existing PSD major source for at least one pollutant.

6. Baseline Emissions (BE)

The BE calculation (in lb/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. 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 a major source for all pollutants, 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	1,851	50,000	N
SO_x	1,394	80,000	N
PM_{10}	1,278	30,000	N
VOC	925	50,000	N

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.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

Step 1

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

The project's combined total emission increases are compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	**Total Emissions Increases (lb/yr)**	**Thresholds (lb/yr)**	**Federal Major Modification?**
NO_x	1,851	0	Y
VOC	925	0	Y
PM_{10}	1,278	30,000	N
$PM_{2.5}$	1,278	20,000	N
SO_x	1,394	80,000	N

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

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 multiplied by 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-8452-101-0	0	887	887
S-8482-102-0	0	964	964
		Net Emission Change (lb/year):	1,851
		Federal Offset Quantity: (NEC * 1.5)	2,777

VOC — Federal Offset Ratio 1.5

Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
S-8452-101-0	0	443	443
S-8482-102-0	0	482	482
		Net Emission Change (lb/year):	925
		Federal Offset Quantity: (NEC * 1.5)	1,388

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)

I.Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be a existing PSD Major Source. Because the project is not located within 10 km (6.2 miles) of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Project Emission Increase – Significance Determination

a. Evaluation of Calculated Post-project Potential to Emit for New or Modified Emissions Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the post-project potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if the total potentials to emit from all new and modified units are below the applicable thresholds, no futher PSD analysis is needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO_2	SO_2	CO	PM	PM_{10}
Total PE from New and Modified Units	10	1	3	1	1
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	n	n	n	n	n

As demonstrated above, because the post-project total potentials to emit from all new and modified emission units are below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 and no further discussion 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. Detailed QNEC calculations are included in Appendix A.

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

Pursuant to District Rule 2201, Section 4.1, 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 Adjusted Increase in Permitted Emissions (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.

*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.

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

As seen in Section VII.C.2 above, the applicant is proposing to install new HTs each with a PE greater than 2 lb/day for NO_x and CO. Therefore BACT for new units with PE > 2 lb/day purposes is triggered for NO_x and CO

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 a Federal Major Modification for NO_x and VOC emissions. Therefore BACT is triggered for NO_x and VOC for all emissions units in the project for which there is an emission increase.

2. BACT Guideline

Please note that BACT Guidelines 1.8.4 Heater Treater < 20 MMBtu/hr, natural gas-fired has been rescinded; therefore, a project-specific BACT determination will be performed.

3. Project-Specific BACT Determination

Pursuant to the project-specific BACT determination (see Appendix C), BACT has been satisfied with the following:

NO_x: 9 ppmvd @ 3% O_2
CO: 50 ppmvd @ 3% O_2
VOC: Gaseous fuel firing

B. Offsets

1. Offset Applicability

Pursuant to District Rule 2201, Section 4.5, 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}	CO	VOC
SSPE2	>20,000	>54,750	>29,200	>200,000	>20,000
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	y	y	y	y	y

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for all pollutants.

Pursuant to section 4.6.1 of Rule 2201, increases in CO in attainment areas are exempt from offsetting if the applicant demonstrates to the satisfaction of the APCO, that the Ambient Air Quality Standards are not violated in the areas to be affected and such emissions will be consistent with Reasonable Further Progress and will not cause or contribute to a violation of Ambient Air Quality Standards. As shown below in section VII.F, Ambient Air Quality Standards are not violated; therefore, offsets are not required for CO.

Therefore offset calculations will be required for NOx, SOx, PM10 and VOC in this project.

NOx:

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) = (Σ[PE2 – BE] + ICCE) x 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,

BE = HAE

The facility is proposing to install new emissions units; therefore BE = 0. Also, there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

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

S-8452-101-0:

PE2 (NO_x) = 887 lb/year
BE (NO_x) = 0 lb/year
ICCE = 0 lb/year

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

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

Offsets Required (lb/year) = ([887 – 0] + 0) x 1.5
= 887 x 1.5
= 1,331 lb NO_x/year

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

Quarterly offsets required (lb/qtr) = (1,331 lb NO_x/year) ÷ (4 quarters/year)
= 332.75 lb/qtr

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:

Redistribution of Required Quarterly Offsets
(where X is the annual amount of offsets, and X ÷ 4 = Y.z)

Value of z	Quarter 1	Quarter 2	Quarter 3	Quarter 4
.0	Y	Y	Y	Y
.25	Y	Y	Y	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 is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
332	333	333	333

Proposed Rule 2201 (offset) Conditions:

- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender NO_x emission reduction credits for the following quantity of emissions: 1st quarter – 332 lb, 2nd quarter – 333 lb, 3rd quarter – 333 lb, and 4th quarter – 333 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201]

- ERC Certificate Number S-4361-2 (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]

S-8452-102-0:

PE2 (NO_x) = 964 lb/year
BE (NO_x) = 0 lb/year
ICCE = 0 lb/year

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

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) x 1.5
= 964 x 1.5
= 1,446 lb NO_x/year

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

Quarterly offsets required (lb/qtr) = (1,446 lb NO_x/year) ÷ (4 quarters/year)
= 361.5 lb/qtr

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:

Redistribution of Required Quarterly Offsets (where X is the annual amount of offsets, and X ÷ 4 = Y.z)				
Value of z	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
.0	Y	Y	Y	Y
.25	Y	Y	Y	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 is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
361	361	362	362

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 4th quarter – 362 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201]

- ERC Certificate Number S-4361-2 (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]

The appropriate quarterly emissions to be offset for both HTs is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
693	694	695	695

The applicant has stated that the facility plans to use ERC certificate S-4361-2 to offset the increases in NOx emissions associated with this project. The above certificate has available quarterly NOx credits as follows:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC #S-4361-2	1,476	1,476	1,476	1,476

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

SOx:

The quantity of offsets in pounds per year for SOx 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) = (Σ[PE2 – BE] + ICCE) x 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,

BE = HAE

The facility is proposing to install new emissions units; therefore BE = 0. Also, 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 approved distance offset ratio is 1:1.5 because the proposed ERC's emission reduction originated greater than 15 miles for the proposed unit. Therefore, the amount of SOx ERCs that need to be withdrawn is:

S-8452-101-0:

Offsets Required (lb/year) = ([668 – 0] + 0) x 1.5
= 668 x 1.5
= 1,002 lb SOx/year

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

Quarterly offsets required (lb/qtr) = (1,002 lb SOx/year) ÷ (4 quarters/year)
= 250.5 lb/qtr

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:

Redistribution of Required Quarterly Offsets (where X is the annual amount of offsets, and X ÷ 4 = Y.z)				
Value of z	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
.0	Y	Y	Y	Y
.25	Y	Y	Y	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 is:
as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
250	250	251	251

S-8452-102-0:

Offsets Required (lb/year) = ([726 – 0] + 0) x 1.5
= 726 x 1.5
= 1,089 lb SOx/year

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

Quarterly offsets required (lb/qtr) = (1,089 lb SOx/year) ÷ (4 quarters/year)
= 272.25 lb/qtr

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:

Redistribution of Required Quarterly Offsets (where X is the annual amount of offsets, and X ÷ 4 = Y.z)				
Value of z	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
.0	Y	Y	Y	Y
.25	Y	Y	Y	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 is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
272	272	272	273

The appropriate quarterly SOx emissions to be offset for both HTs is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
522	522	523	524

PM10

The quantity of offsets in pounds per year for PM10 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) = (Σ[PE2 – BE] + ICCE) x 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,

BE = HAE

The facility is proposing to install new emissions units; therefore BE = 0. Also, 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 approved distance offset ratio is 1:1.5 because the proposed ERC's emission reduction originated greater than 15 miles for the proposed unit.

S-8452-101-0:

The amount of PM10 ERCs that need to be withdrawn is:

Offsets Required (lb/year) = ([612 – 0] + 0) x 1.5
= 612 x 1.5
= 918 lb PM10/year

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

Quarterly offsets required (lb/qtr) = (918 lb PM10/year) ÷ (4 quarters/year)
= 229.5 lb/qtr

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:

Redistribution of Required Quarterly Offsets (where X is the annual amount of offsets, and X ÷ 4 = Y.z)				
Value of z	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
.0	Y	Y	Y	Y
.25	Y	Y	Y	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 is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
229	229	230	230

Interpollutant offset ratios for trades between SO_X and PM_{10} are allowed pursuant to Rule 2201, Section 4.13.3.1.2. Pursuant to draft District policy APR 1430, SOx ERCs may be used to offset PM10 at an interpollutant ratio of 1.0 : 1.0. An interpollutant ratio of 1.0 : 1.0 for SO_X to PM_{10} will be applied.

The appropriate quarterly SOx and PM10 emissions to be offset is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
479	479	481	481

Proposed Rule 2201 SOx and PM10 (offset) Conditions:

- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of emissions: 1st quarter – 479 lb, 2nd quarter – 479 lb, 3rd quarter – 481 lb, and 4th quarter – 481 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201]

- ERC Certificate Number N-1215-5 (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]

S-8452-102-0:

The amount of PM10 ERCs that need to be withdrawn is:

Offsets Required (lb/year) = ([666 – 0] + 0) x 1.5
= 666 x 1.5
= 999 lb PM10/year

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

Quarterly offsets required (lb/qtr) = (999 lb PM10/year) ÷ (4 quarters/year)
= 249.75 lb/qtr

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:

Redistribution of Required Quarterly Offsets (where X is the annual amount of offsets, and X ÷ 4 = Y.z)				
Value of z	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
.0	Y	Y	Y	Y
.25	Y	Y	Y	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 is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
249	250	250	250

Interpollutant offset ratios for trades between SO_X and PM_{10} are allowed pursuant to Rule 2201, Section 4.13.3.1.2. Pursuant to draft District policy APR 1430, SOx ERCs may be used to offset PM10 at an interpollutant ratio of 1.0 : 1.0. An interpollutant ratio of 1.0 : 1.0 for SO_X to PM_{10} will be applied.

The appropriate quarterly SOx and PM10 emissions to be offset is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
521	522	522	523

Proposed Rule 2201 SOx and PM10 (offset) Conditions:

- {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 – 521 lb, 2nd quarter – 522 lb, 3rd quarter – 522 lb, and 4th quarter – 523 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201]

- ERC Certificate Number N-1215-5 (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]

The appropriate quarterly SOx and PM10 emissions to be offset for both HTs is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
1,000	1,001	1,003	1,004

The applicant has stated that the facility plans to use SOx ERC certificate N-1215-5 to offset the increases in SOX and PM10 emissions associated with this project. The above certificate has available quarterly NO_X credits as follows:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC #N-1215-5	4,612	4,612	4,612	4,612

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

VOC:

The quantity of offsets in pounds per year for VOC 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) = (Σ[PE2 – BE] + ICCE) x 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,

BE = HAE

The facility is proposing to install new emissions units; therefore BE = 0. Also, there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

S-8452-101-0:

The amount of VOC ERCs that need to be withdrawn is:

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

PE2 (VOC) = 443 lb/year
BE (VOC) = 0 lb/year
ICCE = 0 lb/year

The project is a Federal Major Modification and therefore the correct offset ratio for VOC is 1.5:1.

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

Offsets Required (lb/year) = ([443 – 0] + 0) x 1.5
= 443 x 1.5
= 665 lb VOC /year

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

Quarterly offsets required (lb/qtr) = (665 lb VOC/year) ÷ (4 quarters/year)
= 166.25 lb/qtr

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:

Redistribution of Required Quarterly Offsets (where X is the annual amount of offsets, and X ÷ 4 = Y.z)				
Value of z	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
.0	Y	Y	Y	Y
.25	Y	Y	Y	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 is:
as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
166	166	166	167

Proposed Rule 2201 (offset) Conditions:

- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 166 lb, 2nd quarter – 166 lb, 3rd quarter – 166 lb, and 4th quarter – 167 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201]

- ERC Certificate Number C-1459-1 (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]

S-8452-102-0:

The amount of VOC ERCs that need to be withdrawn is:

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

PE2 (VOC) = 482 lb/year
BE (VOC) = 0 lb/year
ICCE = 0 lb/year

The project is a Federal Major Modification and therefore the correct offset ratio for VOC is 1.5:1.

Assuming an offset ratio of 1.5:1, the amount of VOC ERCs that need to be withdrawn per each HT is:

Offsets Required (lb/year) = ([482 – 0] + 0) x 1.5
= 482 x 1.5
= 723 lb VOC /year

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

Quarterly offsets required (lb/qtr) = (723 lb VOC/year) ÷ (4 quarters/year)
= 180.75 lb/qtr

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:

Redistribution of Required Quarterly Offsets (where X is the annual amount of offsets, and X ÷ 4 = Y.z)				
Value of z	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
.0	Y	Y	Y	Y
.25	Y	Y	Y	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 is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
180	181	181	181

Proposed Rule 2201 (offset) Conditions:

- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 180 lb, 2nd quarter – 181 lb, 3rd quarter – 181 lb, and 4th quarter – 181 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201]

- ERC Certificate Number C-1459-1 (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]

The appropriate quarterly emissions to be offset for both HTs is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
346	347	347	348

Pursuant to section 4.13.8 of Rule 2201 AER for NOx and VOC that occurred from April through November may be used to offset increases in NOx and VOC during any period of the year.

The applicant has stated that the facility plans to use ERC certificate C-1459-1 to offset the increases in VOC emissions associated with this project. The above certificate has available quarterly VOC credits as follows:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC #C-1459-1	1,055	986	105	1,055

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

3. ERC Withdrawal Calculations

The applicant must identify the ERC Certificate(s) to be used to offset the increase of NOx, SOx PM10 and VOC emissions for the project. As indicated in previous section, the applicant is proposing to use ERC certificates S-4361-2, N-1215-5 and C-1459-1 to mitigate the increases of NOx, SOx PM10 and VOC emissions associated with this project. See **Appendix D** for detailed ERC Withdrawal Calculations.

C. Public Notification

1. Applicability

Pursuant to District Rule 2201, Section 5.4, 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 a Federal Major Modification. Therefore, public noticing for Federal Major Modification purposes is required.

b. PE > 100 lb/day

Applications which include new emissions units each with a PE less than 100 pounds during any one day for any pollutant will trigger public noticing requirements. Therefore, public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

Pursuant to District Rule 2201, Section 4.5.3, offset requirements shall be triggered on a pollutant-by-pollutant basis, unless exempted pursuant to Section 4.6, offsets shall be required if the post-project Stationary Source Potential to Emit (SSPE2) equals or exceeds specific threshold levels.

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	>20,000	>20,000	20,000 lb/year	No
SO_X	>54,750	>54,750	54,750 lb/year	No
PM_{10}	>29,200	>29,200	29,200 lb/year	No
CO	>200,000	>200,000	200,000 lb/year	No
VOC	>20,000	>20,000	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	**SSIPE (lb/year)**	**SSIPE Public Notice Threshold**	**Public Notice Required?**
NO_x	1,851	20,000 lb/year	No
SO_x	1,394	20,000 lb/year	No
PM_{10}	1,278	20,000 lb/year	No
CO	6,223	20,000 lb/year	No
VOC	925	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 modifications is required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project 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:

The unit shall only be fired on natural/TEOR/field gas with a maximum sulfur content of 2.9 gr S/100scf. [District Rules 2201 and 4320] Y

Emission rates shall not exceed: NOx (as NOx): 9 ppmvd @ 3% O2 or 0.011 lb-NOx/MMBtu PM10: 0.0076 lb/MMBtu; CO: 50 ppmvd @ 3% O2 or 0.037 lb-CO/MMBtu; or VOC: 0.0055 lb/MMBtu. [District Rule 2201, 4305, 4306, and 4320] N

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.
Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rule 2201, 4305, 4306, and 4320]

Source testing to measure 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]

2. Monitoring

As required by *District Rule 4305, Boilers, Steam Generators and Process Heaters, Phase 2, District Rule 4306, Boilers, Steam Generators and Process Heaters, Phase 3, and District Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*, this unit is subject to monitoring requirements. Monitoring requirements, in accordance with District Rules 4305, 4306, and 4320 will be discussed in Section VIII, District Rule 4320 of this evaluation.

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:

Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Y

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] N

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]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

Section 4.14 of District Rule 2201 requires that an AAQA be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to **Appendix E** 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. Corporation CRPC's compliance certification is included in Appendix F.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install two heater treaters.

Since the project will authorize heater treaters 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. A significant permit modification is defined as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

Minor permit modifications are not Title I modifications as defined in this rule. This project triggers a Federal Major Modification, as a result, the proposed project constitutes a Significant Modification to the Title V Permit.

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. However, no subparts of 40 CFR Part 60 apply to heater treaters

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 unit 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 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

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Appendix E**), 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:

Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required	Special Permit Requirements
101	0.30	0.00	0.00	3.87E-09	No	Yes
102	0.30	0.00	0.00	3.87E-09	No	Yes
Project Totals	0.60	0.00	0.00	7.73E-09		
Facility Totals	>1	0.43	0.04	3.85E-06		

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.

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 (O_2) 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.

Rule 4301 Fuel Burning Equipment

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

District Rule 4301 Limits (lb/hr)			
	Pollutant		
	NO_2	Total PM	SO_2
S-8452-101-0	0.011 x 9.2 = 0.10	0.0076 x 9.2 = 0.07	0.014 x 9.2 = 0.13
S-8452-102-0	0.011 x 10 = 0.11	0.0076 x 10 = 0.076	0.014 x 10 = 0.14
Rule Limit (lb/hr)	140	10	200

The above table indicates compliance with the maximum lb/hr emissions in 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 HTs are 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	400 ppmv	40 ppmv or 0.052 lb/MMBtu	400 ppmv
	b) Enhanced Schedule 6 ppmv or 0.007 lb/MMBtu			

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 SO2 emissions by at least 95% by weight; or limit exhaust SO2 to less than or equal to 9 ppmv corrected to 3.0% O2 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 2.9 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 NO_X, CO, and O_2 exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the 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.

The unit shall only be fired on natural/TEOR/field gas with a maximum sulfur content of 2.9gr S/100scf. [District Rules 2201 and 4320] Y

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] 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:

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

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 NO_x analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly

spaced out over the 15-consecutive-minute period. Therefore, the following previously listed permit condition will be on the 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 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] N

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.

District Rule 4801 Sulfur Compounds

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

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

EPA F-Factor for Natural Gas: 8,710 dscf/MMBtu at 68 °F, equivalent to

$$Corrected\ F-factor = \left(\frac{8{,}710 dscf}{MMBtu}\right) \times \left(\frac{60^{o}F + 459.6}{68^{o}F + 459.6}\right) = 8{,}578 \frac{dscf}{MMBtu}\ \ at\ 60^{o}F$$

(0.014 gr-S/scf)(lb/7000 gr)(1000 scf/MMBtu)(MMBtu/8578 dscf)(lb-mole/64 lb)(10.76 psi-scf/lb-mole-°R) (520 °R/14.7 psi)(1,000,000 parts/MM) = 1.4 ppmv

1.4 ppmv < 2,000 ppmv (or 0.2%)

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

Oil and gas operations in Kern County must comply with the *Kern 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, 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. The District also prepared a full findings document. The full findings document, *California Environmental Quality Act (CEQA) Statement of Findings for the Kern County Zoning Ordinance EIR* contains the details of the District's findings regarding the Project. The District's implementation of the Kern Zoning Ordinance and its EIR applies to ATC applications received for any new/modified equipment used in oil/gas production in Kern County, including new wells. The full findings applies to the Project and the Project's related activity equipment(s) is covered under the Kern Zoning Ordinance. 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 *Kern 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 *Kern 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. Issue the ATCs subject to the permit conditions on the attached draft ATCs in **Appendix G.**

X. Billing Information

Annual Permit Fees			
Permit Number	**Fee Schedule**	**Fee Description**	**Annual Fee**
S-8452-101-0	3020-02 G	9.2 MMBtu/hr	$936
S-8452-102-0	3020-02 G	10 MMBtu/hr	$936

Appendixes

A: Quarterly Net Emissions Change
B: PEERs
C: BACT Analysis
D: ERC Withdrawal Calculations
E: HRA/AAQA Summary
F: Compliance Certification
G: Draft ATCs

APPENDIX A
Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

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

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

$PE2_{quarterly} = PE2_{annual} \div 4$ quarters/year

$PE1_{quarterly} = PE1_{annual} \div 4$ quarters/year

Quarterly NEC [QNEC] S-8452-101-0					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	887	222	0	0	222
SO_X	668	167	0	0	167
PM_{10}	612	153	0	0	153
CO	2,982	746	0	0	746
VOC	443	111	0	0	111

Quarterly NEC [QNEC] S-8452-102-0					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	964	241	0	0	241
SO_X	1,226	307	0	0	307
PM_{10}	666	167	0	0	167
CO	3,241	810	0	0	810
VOC	482	121	0	0	121

APPENDIX B
PEERs

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

PERMIT-EXEMPT EQUIPMENT REGISTRATION (PEER)

PEER NO: S-8452-1-0 **EXPIRATION DATE:** 11/19/2019

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP
MAILING ADDRESS: 11109 RIVER RUN BLVD
BAKERSFIELD, CA 93311

FACILITY LOCATION: HEAVY OIL CENTRAL

EQUIPMENT DESCRIPTION:
4.2 MMBTU/HR NATURAL GAS-FIRED BOILER WITH A LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) (VPC 17)

CONDITIONS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. 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]
4. The unit shall not exceed any of the following emission limits: 30 ppmvd-NOx @ 3% O2 or 0.036 lb-NOx/MMBtu, or 400 ppmvd-CO @ 3% O2. [District Rule 4307]
5. The owner/operator shall monitor, at least once a month, the operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307]
6. The owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4307]
7. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4307]
8. In lieu of tuning the unit twice each calendar year, the owner/operator shall monitor the emissions with a portable NOx analyzer at least twice each calendar year and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307]

CONDITIONS CONTINUE ON NEXT PAGE

This PEER remains valid through the expiration date listed above, subject to payment of the annual registration fees and compliance with the PEER conditions and all applicable local, state, and federal regulations. This PEER is valid only within the San Joaquin Valley Air Pollution Control District. Any equipment or operation change may require a PEER application be filed with the District.

Samir Sheikh
Executive Director / APCO

Arnaud Marjollet
Director of Permit Services

S-8452-1-0 04/02/2019 -- TORID Joint Inspection NOT Required

9. Source testing to measure NOx and CO emissions from this unit shall be conducted no later than the applicable full compliance date for the unit. [District Rule 4307]
10. 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]
11. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rule 4307]
12. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4307]
13. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4307]
14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 4307]
15. The owner/operator shall maintain records to verify that the required monitoring of the operational characteristics, and tune-ups or portable NOx analyzing has been performed. [District Rule 4307]
16. Tune-up records shall include: 1) date of tune-up, 2) name of technician performing tune-up, and 3) reason that they are qualified. [District Rule 4307]
17. Portable analyzer records shall include: 1) date of emissions analyzing, 2) results of emissions analyzing, 3) name of technician performing analyzing, 4) make and model of analyzer, 5) date of last calibration of the analyzer, and 6) a description of any adjustments made to the unit's operating parameters for the purposes of assuring compliance. [District Rule 4307]
18. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 4307]
19. Formerly S-1326-PEER-15-0.

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

PERMIT-EXEMPT EQUIPMENT REGISTRATION (PEER)

PEER NO: S-8452-5-0 **EXPIRATION DATE:** 04/24/2020

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP
MAILING ADDRESS: 11109 RIVER RUN BLVD
BAKERSFIELD, CA 93311

FACILITY LOCATION: HEAVY OIL CENTRAL

EQUIPMENT DESCRIPTION:
4.99 MMBTU/HR MAXON MODEL XPO 4 PB NATURAL GAS-FIRED PROCESS HEATER WITH A MAXON MODEL XPO 4 PB LOW NOX BURNER

CONDITIONS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. 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]
4. This unit shall be fired exclusively on Public Utilities Commission (PUC) regulated natural gas. [District Rules 4307 and 4801]
5. The unit shall not exceed any of the following emission limits: 30 ppmvd-NOx @ 3% O2 or 0.036 lb-NOx/MMBtu, or 400 ppmvd-CO @ 3% O2. [District Rule 4307]
6. The owner/operator shall monitor, at least once a month, the operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307]
7. The owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4307]
8. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4307]

CONDITIONS CONTINUE ON NEXT PAGE

This PEER remains valid through the expiration date listed above, subject to payment of the annual registration fees and compliance with the PEER conditions and all applicable local, state, and federal regulations. This PEER is valid only within the San Joaquin Valley Air Pollution Control District. Any equipment or operation change may require a PEER application be filed with the District.

Samir Sheikh
Executive Director / APCO

Arnaud Marjollet
Director of Permit Services

S-8452-5-0 04/02/2019 -- TORID Joint Inspection NOT Required

9. In lieu of tuning the unit twice each calendar year, the owner/operator shall monitor the emissions with a portable NOx analyzer at least twice each calendar year and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307]
10. Source testing to measure NOx and CO emissions from this unit shall be conducted no later than 60 days after issuance of this PEER or installation, whichever is later. [District Rule 4307]
11. 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]
12. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rule 4307]
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4307]
14. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4307]
15. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 4307]
16. The owner/operator shall maintain records to verify that the required monitoring of the operational characteristics, and tune-ups or portable NOx analyzing has been performed. [District Rule 4307]
17. Tune-up records shall include: 1) date of tune-up, 2) name of technician performing tune-up, and 3) reason that they are qualified. [District Rule 4307]
18. Portable analyzer records shall include: 1) date of emissions analyzing, 2) results of emissions analyzing, 3) name of technician performing analyzing, 4) make and model of analyzer, 5) date of last calibration of the analyzer, and 6) a description of any adjustments made to the unit's operating parameters for the purposes of assuring compliance. [District Rule 4307]
19. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 4307]

APPENDIX C
Project-Specific BACT Determination

Project-Specific BACT Determination for Field-Gas-Fired Heater Treaters

NOx

District Rule 4320 includes a compliance option that limits units greater than 5 MMBtu/hr and less than 20 MMBtu/hr to 9 ppm @ 3% O_2. This emission limit is determined to be Achieved in Practice control technology for this BACT analysis.

Note that a search of District source test results for permitted HTs indicates that HTs fired on PUC quality natural gas (<1 gr-S/100 scf) can achieve 6 ppmv NOx @ 3% O2. No source tests results were found for field gas-fired HTs; therefore, 6 ppmv NOx @ 3% O2 cannot be considered to be achieved in practice for the proposed field gas-fired HTs.

District Rule 4320 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 6 ppmv @ 3% O_2. Since this is an enhanced option in the rule, it will be considered the Technologically Feasible control technology for the BACT analysis.

The following are possible control technologies:

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

Step 2 - Eliminate Technologically Infeasible Options

The applicant's burner vendor (Maxon) states that their burners (both the M-PAKT and XPO models) cannot be guaranteed to achieve 6 ppm-NOx at 3% O2 when fired on the proposed field gas. Therefore, control technology #2 is eliminated. Note that the majority of burners identified on District heater treater permits are either Maxon M-PAKT of XPO burners.

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.

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

*SCR systems using anhydrous ammonia bottle skids

Therefore the estimated SCR installation cost is $150,000 + $150,000/2 = $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 x $ 225,000
= $36,616/yr

District standard NOx emissions: 0.011 lb/MMBtu
Tech. Feasible NOx Emissions: 0.007 lb/MMBtu

(0.011 – 0.007)(10 MMBtu/hr)(8760 hr/yr) = 350 lb-NOx/yr = 0.17 ton

Cost effectiveness

Cost effectiveness = $ 36,616/yr/ 0.17 ton-NOx/yr = $ 215,388/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.

CO:

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse Guideline 1.8.4 has been rescinded. Note that a search of source test results for permitted HTs indicates that HTs can achieve 50 ppmv CO @ 3% O2.

The following is a possible control technology:

1. 50 ppmv © 3% 02 (natural gas with LPG as back up fuel) and good combustion practices - Achieved in Practice.

b. Step 2 - Eliminate technologically infeasible options

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

c. Step 3 - Rank remaining options by control effectiveness

1. 50 ppmv © 3% 02 (natural gas with LPG as back up fuel) and good combustion practices - Achieved in Practice.

d. Step 4 - Cost Effectiveness Analysis

The most effective control options is proposed; therefore, a cost effective analysis is not required.

e. Step 5 - Select BACT

BACT for CO emissions is 50 ppmv @ 3% 02

VOC:

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse Guideline 1.8.5 has been rescinded. The following is a possible control technology:

1) Gaseous fuel firing - Achieved in Practice

b. Step 2 - Eliminate technologically infeasible options

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

c. Step 3 - Rank remaining options by control effectiveness

1) Gaseous fuel firing - Achieved in Practice

d. Step 4 - Cost Effectiveness Analysis

There are no other technologically feasible control options; therefore, a cost effective analysis is not required.

e. Step 5 - Select BACT

BACT for VOC emissions is: Gaseous fuel firing

APPENDIX D
ERC Withdrawal Calculations

NO_x	1st Quarter (lb)	2nd Quarter (lb)	3rd Quarter (lb)	4th Quarter (lb)
ERC S-4361-2	1,476	1,476	1,476	1,476
Offsets Required (Includes distance offset ratio)	693	694	695	695
Amount Remaining	783	782	781	781
Credits reissued under ERC S-YYYY-2	783	782	781	781

SOx and PM10	1st Quarter (lb)	2nd Quarter (lb)	3rd Quarter (lb)	4th Quarter (lb)
ERC C-1215-5	4,612	4,612	4,612	4,612
Offsets Required (Includes distance offset ratio)	1,000	1,001	1,003	1,004
Amount Remaining	3,612	3,611	3,609	3,608
Credits reissued under ERC C-YYYY-1	3,612	3,611	3,609	3,608

VOC	1st Quarter (lb)	2nd Quarter (lb)	3rd Quarter (lb)	4th Quarter (lb)
ERC C-1459-1	1,055	986	105	1,055
Quarterly transfer	0	- 242	+242	0
Offsets Required (Includes distance offset ratio)	346	347	347	348
Amount Remaining	709	397	0	707
Credits reissued under ERC C-YYYY-1	709	397	0	707

APPENDIX E
HRA/AAQA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	David Torii – Permit Services
From:	Madison R Perkins – Technical Services
Date:	April 1, 2019
Facility Name:	CALIFORNIA RESOURCES PRODUCTION CORP
Location:	HEAVY OIL CENTRAL,
Application #(s):	S-8452-101-0, -102-0
Project #:	S-1190921

Summary

RMR

Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required	Special Permit Requirements
101	0.30	0.00	0.00	3.87E-09	No	Yes
102	0.30	0.00	0.00	3.87E-09	No	Yes
Project Totals	0.60	0.00	0.00	7.73E-09		
Facility Totals	>1	0.43	0.04	3.85E-06		

Proposed Permit Requirements

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

Unit # 101-0, 102-0

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.

Project Description

Technical Services received a request on February 28, 2019 to perform a Risk Management Review (RMR) for the following:

- Unit -101-0: A heater treater with 5 MMBtu/hr burners.
- Unit -102-0: A heater treater with 5 MMBtu/hr burners.

RMR Report

Analysis

The District performed an analysis pursuant to the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015) to determine the possible cancer and non-cancer health impact to the nearest resident or worksite. This policy requires that an assessment be performed on a

unit by unit basis, project basis, and on a facility-wide basis. If a preliminary prioritization analysis demonstrates that:

- A unit's prioritization score is less than the District's significance threshold and;
- The project's prioritization score is less than the District's significance threshold and;
- The facility's total prioritization score is less than the District's significance threshold

Then, generally no further analysis is required.

The District's significant prioritization score threshold is defined as being equal to or greater than1.0. If a preliminary analysis demonstrates that either the unit(s) or the project's or the facility's total prioritization score is greater than the District threshold, a screening or a refined assessment is required

If a refined assessment is greater than one in a million but less than 20 in one million for carcinogenic impacts (Cancer Risk) and less than 1.0 for the Acute and Chronic hazard indices(Non-Carcinogenic) on a unit by unit basis, project basis and on a facility-wide basis the proposed application is considered less than significant. For unit's that exceed a cancer risk of 1 in one million, Toxic Best Available Control Technology (TBACT) must be implemented.

Toxic emissions for this project were calculated using the following methods:

- Toxic emission factors for this unit were derived from data in the 1992 Radian Corporation report to WSPA.

These emissions were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy, risks from the proposed unit's toxic emissions were prioritized using the procedure in the 2016 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 2013-2017 from Bakersfield (rural dispersion coefficient selected) 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.

The following parameters were used for the review:

Source Process Rates					
Unit ID	**Process ID**	**Process Material**	**Process Units**	**Hourly Process Rate**	**Annual Process Rate**
101	1	VOC	MMscf	0.01	43.8
101	2	VOC	MMscf	0.01	43.8
102	1	VOC	MMscf	0.01	43.8
102	2	VOC	MMscf	0.01	43.8

Point Source Parameters						
Unit ID	**Unit Description**	**Release Height (m)**	**Temp. (°K)**	**Exit Velocity (m/sec)**	**Stack Diameter (m)**	**Vertical/ Horizontal/ Capped**
101	Burner2	3.66	450	0.77	0.76	Vertical
101	Burner1	3.66	450	0.77	0.76	Vertical
102	Burner2	3.66	450	0.77	0.76	Vertical
102	Burner1	3.66	450	0.77	0.76	Vertical

Conclusion

RMR

The cumulative acute and chronic indices for this facility, including this project, are below 1.0; and the cumulative cancer risk for this facility, including this project, is less than 20 in a million. In addition, the cancer risk for each unit in this 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).**

To ensure that human health risks will not exceed District allowable levels; the permit requirements listed on page 1 of this report must be included for this proposed unit.

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

APPENDIX F
Compliance Certification

CALIFORNIA
RESOURCES CORPORATION

September 24, 2018

San Joaquin Valley Air Pollution Control District
Attn: Leonard Scandura
Permit Services Manager
34969 Flyover Ct
Bakersfield, CA 93308

Subject: California Resources Corporation - Certification of Compliance

Dear Mr. Scandura:

Rule 2201 section 4.15.2 requires that an owner or operator proposing a federal major modification certify that all major stationary sources owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in California are either in compliance or an a schedule for compliance with all applicable emission limitations and standards. This letter certifies compliance for California Resources Corporation (CRPC) and its affiliates.

CRC has Notices of Violation outstanding issued by your office. However, all issues associated with the Notices of Violation have been addressed. Affiliated companies of CRC own interests in or own and/or operate other major stationary sources in California. These major stationary sources are currently in compliance with applicable compliance schedules (if any) and substantially comply with all applicable laws and regulations.

This certification is made on information and belief and is based upon a review of CRC and affiliated company major stationary sources in the State of California by employees of CRC and its affiliates who have responsibility for compliance with environmental requirements.

This certification is as of the date of its execution.

Sincerely,

Jim Robinson
VP, HSE

cc: Raymond Rodriguez, Environmental Director-North CRC

APPENDIX G
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8452-101-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP
MAILING ADDRESS: 11109 RIVER RUN BLVD
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL CENTRAL

SECTION: 9 **TOWNSHIP:** 27S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
9.2 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER WITH ONE 4.2 MMBTU/HR MAXON XPO BURNER AND A SEPARATE 5.0 MMBTU/HR MAXON M-PAKT (OR EQUIVALENT) LOW NOX BURNER

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOX emission reduction credits for the following quantity of emissions: 1st quarter - 332 lb, 2nd quarter - 333 lb, 3rd quarter - 333 lb, and 4th quarter - 333 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number S-4361-2 (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 other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services
S-8452-101-0 Apr 29 2019 8:39AM – TORID : 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 - 479 lb, 2nd quarter - 479 lb, 3rd quarter - 481 lb, and 4th quarter - 481 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
6. ERC Certificate Number N-1215-5 (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 VOC emission reduction credits for the following quantity of emissions: 1st quarter - 180 lb, 2nd quarter - 181 lb, 3rd quarter - 181 lb, and 4th quarter - 181 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
8. ERC Certificate Number C-1459-1 (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. PEER S-8452-1 shall be canceled upon implementation of this ATC. [District Rule 2250]
10. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
13. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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]
15. 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
16. The unit shall only be fired on natural/TEOR/field gas with a maximum sulfur content of 2.9 gr S/100scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
17. Emission rates shall not exceed: NOx (as NOx): 9 ppmvd @ 3% O2 or 0.011 lb-NOx/MMBtu; PM10: 0.0076 lb/MMBtu; CO: 50 ppmvd @ 3% O2 or 0.037 lb-CO/MMBtu; or VOC: 0.0055 lb/MMBtu. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Source testing to measure 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

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

21. 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

22. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (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

23. 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

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

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

26. 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

27. 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

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CONDITIONS CONTINUE ON NEXT PAGE

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

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

30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the 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, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. 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

32. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

33. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit

34. 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, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

35. 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 and 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-8452-102-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP
MAILING ADDRESS: 11109 RIVER RUN BLVD
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL CENTRAL

SECTION: 9 **TOWNSHIP:** 27S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
10.0 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER WITH ONE MAXON XPO 5.0 MMBTU/HR BURNER AND A SEPARATE 5.0 MMBTU/HR MAXON M-PAKT (OR EQUIVALENT) LOW NOX BURNER

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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 4th quarter - 362 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number S-4361-2 (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 other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

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Arnaud Marjollet, Director of Permit Services

S-8452-102-0 : Apr 29 2019 0 39AM – TORID : 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 - 521 lb, 2nd quarter - 522 lb, 3rd quarter - 522 lb, and 4th quarter - 523 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
6. ERC Certificate Number N-1215-5 (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 VOC emission reduction credits for the following quantity of emissions: 1st quarter - 180 lb, 2nd quarter - 181 lb, 3rd quarter - 181 lb, and 4th quarter - 181 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
8. ERC Certificate Number C-1459-1 (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. PEER S-8452-5 shall be canceled upon implementation of this ATC. [District Rule 2250]
10. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
13. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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]
15. 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
16. The unit shall only be fired on natural/TEOR/field gas with a maximum sulfur content of 2.9 gr S/100scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
17. Emission rates shall not exceed: NOx (as NOx): 9 ppmvd @ 3% O2 or 0.011 lb-NOx/MMBtu; PM10: 0.0076 lb/MMBtu; CO: 50 ppmvd @ 3% O2 or 0.037 lb-CO/MMBtu; or VOC: 0.0055 lb/MMBtu. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Source testing to measure 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

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

21. 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

22. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (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

23. 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

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

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

26. 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

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