San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAR 0 8 2018

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

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
Facility Number: S-8282
Project Number: S-1173681

Dear Ms. Campbell:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project: installation of a 1,380 bhp natural gas/field gas/LPG-fired rich-burn IC engine powering an electrical generator.

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

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

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Enclosures

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

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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

One New Gas-Fired IC Engine

Facility Name:	California Resources Production Corp.	Date:	February 13, 2018
Mailing Address:	11109 River Run Blvd. Bakersfield, CA 93309	Engineer:	Silvana Procopio
		Lead Engineer:	Steve Davidson
Contact Person:	Charlotte Campbell		
Telephone:	661-763-6354		
Application #(s):	S-8282-198-0		
Project #:	S-1173681		
Deemed Complete:	November 13, 2017		

2-13-18

I. Proposal

California Resources Production Corp (CRPC) has requested an Authority to Construct (ATC) for the installation of one 1380 bhp IC engine fired on PUC quality natural gas, field gas, or LPG, to be used for electrical generation.

The proposed engine is either a Waukesha Model L5794GSI with a three-way catalyst or an equivalent unit. Conditions on equivalent equipment approval will be included in the ATC.

The installation of the IC engine will trigger BACT, offsets, and public notice.

CRPC operates under a Title V PTO. The project is a Federal Major Modification and therefore it is classified as a Title V Significant Modification pursuant to Rule 2520, Section 3.20, and it 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 Operating Permit to include the requirements of the ATC issued with this project.

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) – 40 CFR 60 Subparts JJJJ
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)

Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4701	Stationary Internal Combustion Engines – Phase 1 (8/21/03)
Rule 4702	Stationary Internal Combustion Engines – Phase 2 (11/4/13)
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 project is located at CRPC's BV Nose facility in NW/4 Section 10, Township 32S, Range 25E. The project is not located within 1,000 feet of a school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

A location map can be found in **Appendix A**.

IV. Process Description

The engine will power an electrical generator. The BV Nose 10H facility is not connected to the electrical grid.

V. Equipment Listing

S-8282-198-0: 1380 BHP GAS-FIRED RICH BURN IC ENGINE WAUKESHA MODEL L5794GSI (OR EQUIVALENT) WITH A THREE-WAY CATALYST, FIRED ON PUC QUALITY NATURAL GAS, FIELD GAS, OR LPG FOR ELECTRICAL GENERATION

VI. Emission Control Technology Evaluation

The IC engine is equipped with a three-way catalytic (TWC) converter in conjunction with an air/fuel ratio control to regulate NOx, CO, and VOC emissions.

A three-way catalytic (TWC) converter decreases NO_X, CO and VOC emissions by using a catalyst to promote the chemical reduction of NO_X into N_2 and O_2, and the chemical oxidation of VOC and CO into H_2O and CO_2.

The air/fuel ratio control is used to maintain the amount of oxygen in the exhaust stream to optimize catalyst function.

VII. General Calculations

A. Assumptions

Operation: 24 hr/day; 7 day/wk; 8,760 hr/year
The engine will be fired on PUC quality natural gas, field gas, or LPG (per applicant)
EPA F-factor (adjusted to 60°F): 8,578 dscf/MMBtu (40 CFR 60 Appendix B)
Fuel heating value: 1,000 Btu/scf (District Policy APR 1720)
Conversion Btu to bhp-hr: 2,542.5 Btu/bhp-hr (AP 42 Appendix A-14)
Thermal efficiency of engine: commonly ≈ 35%
Molar Volume: 379.5 dscf/lb-mol

B. Emission Factors

Emission Factors				
Pollutant	**ppm @ 15% O_2**	**lb/MMBtu**	**g/hp-hr**	**Source**
NOx	5		0.070	BACT Guideline 3.3.12
SOx		0.00285	0.0093	APR 1720 - See Calculations below
PM10		0.01941*	0.064	AP-42 (7/00) Table 3.2-3
CO	56		0.6	BACT Guideline 3.3.12
VOC	25		0.15	BACT Guideline 3.3.12

*PM10 includes both filterable (9.50×10^{-3} lb/MMBtu) and condensable (9.91×10^{-3} lb/MMBtu) = 0.01941 lb/MMBtu

For SOx:

$$\frac{0.00285 \text{ lb}}{\text{MMBtu}} \times \frac{0.002542 \text{ MMBtu}}{\text{hp-hr}_{in}} \times \frac{1 \text{ hp}_{in}}{0.35 \text{ hp}_{out}} \times \frac{453.6 \text{ g}}{1 \text{ lb}} = 0.0093 \text{ g/hp-hr}$$

For PM10:

$$\frac{0.01941 \text{ lb}}{\text{MMBtu}} \times \frac{0.0025425 \text{ MMBtu}}{\text{hp-hr}_{in}} \times \frac{1 \text{ hp}_{in}}{0.35 \text{ hp}_{out}} \times \frac{453.6 \text{ g}}{1 \text{ lb}} = 0.064 \text{ g/hp-hr}$$

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since this is a new emissions unit, PE1 is zero for all pollutants.

2. Post Project Potential to Emit (PE2)

Daily Post Project Emissions					
Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Daily Hours of Operation (hrs/day)	Conversion (g/lb)	PE2 Total (lb/day)
NO_X	0.07	1,380	24	453.6	5.1
SO_X	0.0093	1,380	24	453.6	0.7
PM_{10}	0.064	1,380	24	453.6	4.7
CO	0.6	1,380	24	453.6	43.8
VOC	0.15	1,380	24	453.6	10.9

Annual Post Project Emissions					
Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Annual Hours of Operation (hrs/yr)	Conversion (g/lb)	PE2 Total (lb/yr)
NO_X	0.07	1,380	8,760	453.6	1,866
SO_X	0.0093	1,380	8,760	453.6	248
PM_{10}	0.064	1,380	8,760	453.6	1,706
CO	0.6	1,380	8,760	453.6	15,990
VOC	0.15	1,380	8,760	453.6	3,998

Emissions Profiles are included in **Appendix C.**

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

Pursuant to Section 4.9 of District Rule 2201, the pre-project stationary source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the stationary source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. The facility has no ERCs for onsite reductions.

SSPE1* (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
SSPE Calculator	553,356	77,273	83,880	5,480,108	1,154,624
SSPE1	553,356	77,273	83,880	5,480,108	1,154,624

*Facilities S-382, S-1216, S-1738, S-8282, and S-8454 constitute the same light oil western stationary source.

The SSPE1 calculations can be found in **Appendix D**.

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

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid ATCs or PTOs, except for emissions units proposed to be shut down as part of the Stationary Project, at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

For this project, the change in emissions for the facility is due to the installation of a new gas-fired IC engine, permit unit '-198. Thus:

SSPE2 (lb/year)					
Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1	553,356	77,273	83,880	5,480,108	1,154,624
S-8282-198-0	1,866	248	1,706	15,990	3,998
SSPE2	**555,222**	**77,521**	**85,586**	**5,496,098**	**1,158,622**

5. Major Source Determination

Rule 2201 Major Source Determination:

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

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)

- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NO_X	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**VOC**
SSPE1	553,356	77,273	83,880	83,880	5,480,108	1,154,624
SSPE2	555,222	77,521	85,586	85,586	5,496,098	1,158,622
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	**Yes**	**No**	**No**	**No**	**Yes**	**Yes**

Note: PM2.5 assumed to be equal to PM10

This source is an existing Major Source for NOx, CO, and VOC emissions and will remain a Major Source for these pollutants. The source is not becoming a new major source for any other pollutant.

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	277	577	39	2,740	42	42
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ?	**Yes**	**Yes**	**No**	**Yes**	**No**	**No**

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

6. Baseline Emissions (BE)

a. Annual BE

The annual BE is performed pollutant by pollutant for each unit within the project to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. For this project, the annual BE will be performed to calculate quarterly Baseline Emissions (QBE).

BE = Pre-project Potential to Emit (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 Section 3.8 of District Rule 2201.

The IC engine is new and therefore **BE = PE1 = 0 for all criteria 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 CO, NOx and VOC 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	1,866	50,000	**No**
SO_x	248	80,000	**No**
VOC	3,998	50,000	**No**

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

8. Federal Major Modification

District Rule 2201, Section 3.18 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

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*	1,866	0	**Yes**
VOC*	3,998	0	**Yes**
PM_{10}	1,706	30,000	**No**
$PM_{2.5}$	1,706	20,000	**No**
SO_x	248	80,000	**No**

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:

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

NOx

Federal Offset Ratio: 1.5

Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
S-8282-198-0	0	1,866	1,866
		Net Emission Change (lb/year):	1,866
		Federal Offset Quantity: (NEC x 1.5)	2,799

VOC

Federal Offset Ratio: 1.5

Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
S-8282-198-0	0	3,998	3,998
		Net Emission Change (lb/year):	3,998
		Federal Offset Quantity: (NEC x 1.5)	5,997

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

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

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

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	1	0	8	1	1
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	**No**	**No**	**No**	**No**	**No**

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 E.

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

*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 a new IC engine with a PE greater than 2 lb/day for NO_x, PM_{10}, CO, and VOC. Therefore, BACT is triggered these four pollutants.

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 constitutes a Federal Major Modification for NO_x and VOC emissions. Therefore, BACT is triggered for NO_x and VOC emissions.

2. BACT Guideline

BACT Guideline 3.3.12 applies to natural-fired IC engines greater than 50 bhp. [Non-Agricultural Fossil Fuel-Fired IC Engine >50 bhp]. (See Appendix F)

3. Top-Down BACT Analysis

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

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

NO_x: 5 ppmv @ 15% O2

PM10: 0.06 g/bhp-hr

CO: 56 ppmv @ 15% O2

VOC: 25 ppmv @ 15% O2

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant-by-pollutant basis and shall be required if the SSPE2 equals to 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	555,222	77,521	85,586	5,496,098	1,158,622
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for NOx, SOx, PM10, CO, and VOC; therefore offset calculations will be required for this project.

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

Offsets Required (lb/year) = (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 a new emissions unit; therefore BE = 0. Also, there is only one emissions unit associated with this project and there are no increases in cargo carrier emissions; therefore, offsets can be determined as follows:

NOx

Applicant has proposed to use ERC S-4361-2 with an offset ratio of 1.5:1 (Federal Major Modification).

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

PE2 (NOx) = 1,866 lb/year
BE (NOx) = 0 lb/year
ICCE = 0 lb/year

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

Offsets Required (lb/year) = 1,866 x 1.5
= **2,799 lb NOx/year** (699.75 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 are as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total Annual
699	700	700	700	2,799

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	11,827	11,827	11,827	11,827

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

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 – 699 lb, 2nd quarter – 700 lb, 3rd quarter – 700 lb, and fourth quarter – 700 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/2016) 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]*

PM10

Applicant has proposed the use of ERCs S-4906-4 and S-4647-4 with reductions occurring at another stationary source within 15 miles of S-8282.

As shown in Section VII C.5, this facility is not a major source for PM10. Therefore, pursuant to Rule 2201 Table 4-2, an offset ratio of 1.2:1 will be used and the amount of ERCs that need to be withdrawn is:

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

PE2 (PM10) = 1,706 lb/year
BE (PM10) = 0 lb/year
ICCE = 0 lb/year

Offsets Required (lb/year) = 1,706 x 1.2
= 2,047 lb PM10/year (511.75 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 are as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total Annual
511	512	512	512	**2,047**

The applicant has stated that the facility plans to use ERC certificates S-4906-4 and S-4647-4 to offset the increases in PM10 emissions associated with this project. These certificates have available quarterly PM10 credits as follows:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC #S-4906-4	300	172	839	958
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC #S-4647-4	204	204	203	203
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Total	504	376	1,042	1,161

As per Rule 2201, Section 4.13.7, Actual Emissions Reductions (AER) for PM that occurred from October through March, inclusive, may be used to offset increases in PM during any period of the year. Therefore, PM credits from the 3rd Quarter will be used for the 1st and 2nd Quarter. The facility has sufficient credits to fully offset the quarterly PM10 emissions increases associated with this project. Therefore, the applicant proposes to surrender the following amount of credits in each quarter:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
ERC #S-4906-4	300	172	452	309	
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
ERC #S-4647-4	204	204	203	203	
	1st Quarter	**2nd Quarter**	**3rd Quarter**	**4th Quarter**	**Total Annual**
Total	**504**	**376**	**655**	**512**	**2,047**

Proposed Rule 2201 (offset) Conditions:

- *{GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: 1st quarter – 511 lb, 2nd quarter – 512 lb, 3rd quarter – 512 lb, and fourth quarter – 512 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/2016) for the ERC specified below. [District Rule 2201]*

- *ERC Certificate Number S-4647-4 and S-4906-4 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]*

CO

PE2 (CO): 15,990 lb/yr

Notwithstanding the above, Section 4.6.1 of Rule 2201 states that emissions offsets are not required for increases in carbon monoxide in attainment areas provided 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. The District performed an Ambient Air Quality Analysis and

determined that this project will not result in or contribute to a violation of an Ambient Air Quality Standard for CO (see **Appendix H**). Therefore, CO offsets are not required for this project.

VOC

Applicant has proposed to use ERC S-1708-1 with an offset ratio of 1.5:1 (Federal Major Modification).

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

PE2 (VOC) = 3,998 lb/year
BE (VOC) = 0 lb/year
ICCE = 0 lb/year

Therefore, the amount of VOC ERCs that need to be withdrawn is:

Offsets Required (lb/year) = (3,998 + 0) x 1.5

= **5,997 lb VOC/year** (1,499.25 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 are as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total Annual
1,499	1,499	1,499	1,500	5,997

The applicant has stated that the facility plans to use ERC certificate S-1708-1 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 #S-1708-1	1,664	3,970	4,474	1,892

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

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 – 1,499 lb, 2nd quarter – 1,499 lb, 3rd quarter – 1,499 lb, and fourth quarter – 1,500 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/2016) for the ERC specified below. [District Rule 2201]*

- *ERC Certificate Number S-1708-1 (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]*

SOx

Applicant has proposed to use the following ERCs:

ERC No.
S-826-5
S-4017-5
S-4196-5
S-1950-5

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

PE2 (NOx) = 248 lb/year (62 lb/qtr)
BE (NOx) = 0 lb/year
ICCE = 0 lb/year

The proposed ERCs were originated within 15 miles of the stationary source. Therefore, the offsets ratio will be 1.3:1 and the amount of SOx ERCs that need to be withdrawn is as follows:

Offsets Required (lb/yr) = 248 x 1.3
= **322 lb SOx/year** (80.5 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 are as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total Annual
80	80	81	81	322

The applicant has stated that the facility plans to use the following ERCs to offset the increases in SOx emissions associated with this project:

	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
Offsets required	80	80	81	81
S-826-5	5	5	4	5
S-4017-5	5	0	0	0
S-4196-5	8	5	14	15
S-1950-5	496	306	118	118
Total Available	**514**	**316**	**136**	**138**

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

Proposed Rule 2201 (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 – 80 lb, 2nd quarter – 80 lb, 3rd quarter – 81 lb, and fourth quarter – 81 lb. These amounts include the applicable offset ratios specified in Rule 2201 Section 4.8 (as amended 2/18/2016) for the ERCs specified below. [District Rule 2201]*

- *ERC Certificate Numbers S-826-5, S-4017-5, S-4196-5, and S-1950-5 (or a certificate split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]*

C. Public Notification

1. Applicability

Public noticing is required for:

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

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

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

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

As demonstrated in Sections VII.C.7 and VII.C.8, this project does not constitute an SB 288 but it is a Federal Major Modification for VOC and NOx emissions; therefore, public noticing for Federal Major Modification purposes is required.

b. PE > 100 lb/day

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

c. Offset Threshold

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

Offset Thresholds				
Pollutant	**SSPE1 (lb/year)**	**SSPE2 (lb/year)**	**Offset Threshold**	**Public Notice Required?**
NO_X	553,356	555,222	20,000 lb/year	**No**
SO_X	77,273	77,521	54,750 lb/year	**No**
PM_{10}	83,880	85,586	29,200 lb/year	**No**
CO	5,480,108	5,496,098	200,000 lb/year	**No**
VOC	1,154,624	1,158,622	20,000 lb/year	**No**

As detailed above, all thresholds were already surpassed with this project; therefore, public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	**SSPE2 (lb/year)**	**SSPE1 (lb/year)**	**SSIPE (lb/year)**	**SSIPE Public Notice Thresholds**	**Public Notice Required?**
NO_x	555,222	553,356	1,866	20,000 lb/year	**No**
SO_x	77,521	77,273	248	20,000 lb/year	**No**
PM_{10}	85,586	83,880	1,706	20,000 lb/year	**No**
CO	5,496,098	5,480,108	15,990	20,000 lb/year	**No**
VOC	1,158,622	1,154,624	3,998	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 does constitute a Title V significant modification. Therefore, public noticing for Title V significant modification is required for this project.

2. Public Notice Action

As discussed above, this project will result in emissions, which would subject the project to some of the noticing requirements listed above. Therefore, public notice will be required for this project.

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:

- *NO_x emission concentrations shall not exceed 5 ppm by volume at 15% O_2 or 0.07 g/bhp-hr. [District Rules 2201, 4701, and 4702] Y*
- *VOC emissions concentrations shall not exceed 25 ppmv at 15% O_2 or 0.15 g/bhp-hr. [District Rules 2201, 4701, and 4702] Y*
- *CO emission concentrations shall not exceed 56 ppm by volume at 15% O_2 or 0.6 g/bhp-hr. [District Rules 2201, 4701, and 4702] Y*
- *PM10 emission concentrations shall not exceed 0.06 g/bhp-hr. [District Rules 2201, 4701, and 4702] Y*
- *Unit shall be fired only on natural gas with a sulfur content of less than or equal to 1.0 grains per 100 dry standard cubic feet of fuel gas. [District Rules 2201 and 4801] Y*
- *Emissions from the engine shall neither exceed SOx (as SO2) - 0.00285 lb/1,000 scf of fuel burned, nor PM10 - 0.019 lb/1,000 scf of fuel burned. [District Rule 2201] Y*

E. Compliance Assurance

1. Source Testing

As per District Rule 4702 Section 6.3.2.1 for new emissions units, NOx, VOC and CO emissions must be tested upon initial start-up every 24 months thereafter.

The following condition will be placed on the ATC to ensure compliance:

- *NOx, CO, and VOC emissions shall be measured (source tested) within 60 days of startup and not less than once every 24 months thereafter. [District Rules 4701 and 4702] Y*

2. Monitoring

District Rule 4702 Section 5.8.1 requires periodic monitoring of NOx and CO. Therefore, the following conditions will be included in this permit:

- *The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5*

days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 2520, 4701, and 4702] Y

- *If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 2520, 4701, and 4702] Y*

- *All 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 by the portable analyzer 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 4701 and 4702] Y*

Rule 4702 requires that the equipment be fired on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases; or to limit gaseous fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet. Therefore, to ensure compliance with Rule 2201 and the monitoring requirements of Rule 4702 the following conditions will be placed on the ATC:

- *If the engine is fired on natural gas certified by the supplier to have a sulfur content of 1.0 grains per 100 dscf or less, then the permittee shall maintain on file copies of all natural gas bills and supplier certifications for a period of five years. [District Rules 2201 and 4702] Y*

- *If the engine is not fired on natural gas certified by the supplier to have a sulfur content of 1.0 grains per 100 dscf or less, then the sulfur content of the natural gas being fired in the engine shall be determined using EPA Method 6C, EPA Method 8, or ARB Method 100. [District Rules 2201 and 4702] Y*

- *If the engine is not fired on natural gas certified by the supplier to have a sulfur content of 1.0 grains per 100 dscf or less, the sulfur content of each fuel source*

shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 2201 and 4702] Y

- *Permittee shall maintain accurate records of fuel gas BTU content, and daily records of volume and sulfur content of gas burned. [District Rule 2201] Y*

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition will be listed on this permit:

- *The permittee shall maintain records of: (1) total hours of operation; (2) type and quantity of fuel used; (3) maintenance or modifications performed; (4) the date and time of NOx, CO, and O2 measurements; (5) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2; (6) make and model of exhaust gas analyzer; (7) exhaust gas analyzer calibration records; and (8) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702] Y*

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The AAQA analysis is included in **Appendix H.**

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Title I 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 project is a federal major modification and therefore this requirement is applicable. The compliance certification form is included in **Appendix I.**

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install a natural gas-fired engine for electrical generation.

Since the engine will provide electricity for equipment to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

I. Equivalent Equipment

The applicant has requested that the installation of an equivalent emissions unit be considered. Therefore, the following conditions will be listed on the permit:

- *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] Y*

- *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] Y*

- *Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Y*

- *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] Y*

Rule 2410 Prevention of Significant Deterioration

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

Rule 2520 Federally Mandated Operating Permits

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

The project is a Federal Major Modification and therefore it is also a Title V Significant Modification. As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The Title V Compliance Certification form is included in **Appendix I**.

Rule 4001 New Source Performance Standards (NSPS)

40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Spark ignited engines, manufactured on or after July 1, 2007, greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP) are subject to the requirements of this subpart. Therefore, the subpart is applicable.

40 CFR 60.4233(e) requires owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) to comply with the emission standards in Table 1 to this subpart for their stationary SI ICE.

CRPC proposes the installation of a non-certified SI ICE equipped with NSCR for compliance with BACT standards, the emission limits in Table 1 of this subpart and with 40 CFR 60.4243(g), including periodic NOx and CO emission monitoring (monthly portable analyzer monitoring) and biennial compliance demonstrations (source testing).

Compliance with the subpart is expected.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to IC engines.

Rule 4101 Visible Emissions

Rule 4101 states that 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 IC engine is fired on either PUC quality natural gas, field gas, or LPG with a low sulfur content, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. Also, based on past inspections of the facility continued compliance is expected.

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 will 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 (see **Appendix H**), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-8282-198-0	0.28 per million	No

Discussion of T-BACT

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

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 20 in a million). As outlined by the HRA Summary in Appendix H of this report, the emissions increases for this project was determined to be less than significant.

The following special condition is required to ensure that the equipment is operated in the manner assumed when the RMR was performed:

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

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.

$$0.064 \quad \frac{g-PM_{10}}{bhp-hr} \times \frac{1g-PM}{0.96g-PM_{10}} \times \frac{1\,bhp-hr}{2{,}542.5\,Btu} \times \frac{10^6\,Btu}{8{,}578\,dscf} \times \frac{0.35\,Btu_{out}}{1\,Btu_{in}} \times \frac{15.43\,grain}{g} = \quad 0.0165 \quad \frac{grain-PM}{dscf}$$

Since 0.0165 grain-PM/dscf is ≤ to 0.1 grain per dscf, compliance with Rule 4201 is expected.

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

Rule 4701 Internal Combustion Engines

The purpose of this rule is to limit the emissions of nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines. Except as

provided in Section 4.0, the provisions of this rule apply to any internal combustion engine, rated greater than 25 bhp, which requires a PTO.

The subject engine is also subject to District Rule 4702, Internal Combustion Engines. Since emissions limits of District Rule 4702 and all other requirements are equivalent or more stringent than District Rule 4701 requirements, compliance with District Rule 4702 requirements will satisfy requirements of District Rule 4701.

Rule 4702 Stationary Internal Combustion Engines – Phase 2

The purpose of this Rule is to limit NO_x, CO, and VOC emissions from internal combustion engines rates 25 bhp or greater.

The new spark-ignited internal combustion engine is rich-burn and is rated 1,380 bhp. Therefore, this engine is subject to the requirements of this rule.

Section 5.1 applies to non-agricultural engines rated between 25 and 50 bhp. The engine is rated greater than 50 bhp. Therefore, this section does not apply.

Section 5.2.1 states the operator of a spark-ignited IC engine rated greater than 50 bhp that is used exclusively in non-agricultural operations (AO) shall not operate it in such a manner that results in emissions exceeding the limits in Table 1 for the appropriate engine type until such time that the engine has demonstrated compliance with Table 2 emission limits pursuant to the compliance deadlines in Section 7.5.

The engine will comply with the emission limits specified in Table 2 (discussed below). Since the emissions limits in Table 2 are equal to or more stringent than the emission limits specified in Table 1, compliance with Table 2 emission limits will show compliance with Table 1 emission limits.

Section 5.2.2 states on and after the compliance schedule specified in Section 7.5, the operator of a spark-ignited engine > 50 bhp that is used in non-AO shall comply with all of the applicable requirements of the rule and one of the following, on an engine-by-engine basis:

5.2.2.1 On and after the compliance schedule specified in Section 7.5, the operator of a spark-ignited engine that is used exclusively in non-AO shall comply with the following requirements on an engine-by-engine basis:

- 5.2.2.1.1 NOx, CO, and VOC emission limits pursuant to Table 2;
- 5.2.2.1.2 SOx control requirements of Section 5.7, pursuant to the deadlines specified in Section 7.5; and
- 5.2.2.1.3 Monitoring requirements of Section 5.10, pursuant to the deadlines specified in Section 7.5.

5.2.2.2, 5.2.2.3 Emissions fee and alternative emission control plan requirements pursuant to Section 8.0 – not applicable.

Per the compliance schedules in Section 7.5, the earliest compliance date for an engine subject to Table 2 emission limits is January 1, 2014. However, the engines already meet the requirements listed in Section 5.2.2.1. Therefore, compliance with Section 5.2.2 and Table 2 emission limits will be shown.

Table 2. Rule 4702 Emission Limits			
Engine Type	**NOx Emission Limit (ppmv @ 15% O_2, dry)**	**CO Emission Limit (ppmv @ 15% O_2, dry)**	**VOC Emission Limit (ppmv @ 15% O_2, dry)**
Rich-burn Engine, not listed above	11	2,000	250

The proposed emissions are 5 ppmv @3% NOx, 56 ppmv @ 3% CO, and 25 ppmv @ 3% VOCs. Therefore, compliance with Table 2 is expected.

Sections 5.2.3, 5.2.4, 5.2.5, and 5.3 apply to spark-ignited AO and CI engines and engines equipped with CEMs. Therefore, these sections do not apply.

Sections 5.4 and 5.5 pertain to engines using a percent emission reduction to comply with the NOx emission limits specified in Section 5.2. The ATC includes emissions limits in lb/hr and ppmv @ 15% O_2; therefore, percent emission reduction is not being used. These sections of the rule do not apply.

Section 5.6 applies to operators who elect to pay an annual fee in lieu of complying with the NOx emission limit requirements of Section 5.2.2.1.1. The engine will comply with the NOx emission limit requirement of Section 5.2.2.1.1. Therefore, this section does not apply.

Section 5.7 states that on and after the compliance schedule specified in Section 7.5, operators of non-AO spark-ignited engines and non-AO compression-ignited engines shall comply with one of the following requirements:

5.7.1 Operate the engine exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases; or
5.7.2 Limit gaseous fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet; or
5.7.3 Use California Reformulated Gasoline for all gasoline-fired spark-ignited engines; or
5.7.4 Use California Reformulated Diesel for all compression-ignited engines; or
5.7.5 Operate the engine on liquid fuel that contains no more than 15 ppm sulfur, as determined by the test method specified in Section 6.4.6; or
5.7.6 Install and properly operate an emission control system that reduces SO2 emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6.

The IC engine will combust gas containing no more than 1 gr S/100scf; therefore, it meets the requirement of Section 5.7.2, 5 gr S/100 scf.

Section 5.8 requires the operator with an engine equipped with an external control device to either install, operate, and maintain continuous monitoring equipment (CEMs) for NOx, CO, and oxygen, as identified in Rule 1080 (Stack Monitoring), or install, operate, and maintain APCO-approved alternate monitoring consisting of one or more of the following:

- Periodic NO_x and CO emission concentrations,
- Engine exhaust oxygen concentration,
- Air-to-fuel ratio,
- Flow rate of reducing agents added to engine exhaust,
- Catalyst inlet and exhaust temperature,
- Catalyst inlet and exhaust oxygen concentration,
- Other operational characteristics.

The engine will utilize periodic monitoring of emissions with a portable analyzer and have the following conditions listed on the permit to ensure compliance:

- *The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 2520, 4701, and 4702] Y*

- *If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 2520, 4701, and 4702] Y*

- *{3787} 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 Rule 4702]*

Section 5.8.3 requires alternate monitoring system to be approved by APCO. Compliance with this requirement is expected.

Sections 5.8.4 and 5.8.5 apply to installed monitoring systems (CEMS). This section does not apply.

Section 5.8.6 requires that each engine shall have a non-resettable operating time meter. The engines are currently equipped with a non-resettable elapsed operating meter and the following condition will be listed on each permit to ensure compliance.

- *{3404} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] N*

Section 5.8.7 requires that, for the engine, the operator implement the Inspection and Monitoring (I&M) plan, if any, submitted to and approved by the APCO pursuant to Section 6.5.

Section 5.8.8 requires that, for the engine, the operator collect data through the I&M plan in a form approved by the APCO.

The following conditions will ensure compliance:

- *{3202} This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702]*

- *The operator shall collect data through the I&M plan in a form approved by the APCO. [District Rule 4702]*

Section 5.8.9 requires that a portable NO_x analyzer be used to take NO_x emission readings to verify compliance with the emission requirements of Section 5.1 during each calendar quarter in which a source test is not performed. The data must be taken and reported as approved by the APCO. This requirement is identified in the alternate monitoring section above and by inclusion of the following ATC condition:

- *The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 2520, 4701, and 4702] Y*

Section 5.9 includes the monitoring requirements for other engines not subject to Section 5.8 – not applicable

Section 5.10 includes the SOx emissions monitoring requirements, which are applicable after compliance deadline in Table 7.5.

Section 5.10.1 requires an annual fuel sulfur analysis, which is applicable after compliance deadline in Table 7.5.

Sections 5.10.2 and 5.10.3 are applicable only if SOx control device used, which it has not proposed. Therefore, this section does not apply.

Section 5.11 applies to PEERS; therefore, it is not applicable.

Section 6.1 requires the submission of an APCO-approvable emission control plan to satisfy the emission requirements of Section 5.2 and the compliance schedules of Section 7.0. The submission of this application satisfies this requirement.

Section 6.2.1 requires to maintain an operating log to demonstrate compliance with this rule. The following condition will satisfy this Section of the Rule:

- *The permittee shall maintain an engine operating log to demonstrate compliance. The permittee shall maintain records of: (1) total hours of operation; (2) type and quantity of fuel used; (3) maintenance or modifications performed; (4) the date and time of NOx, CO, and O2 measurements; (5) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2; (6) make and model of exhaust gas analyzer; (7) exhaust gas analyzer calibration records; and (8) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702] Y*

Section 6.2.2 states that the data collected shall be maintained for at least five years, shall be readily available and made available to the APCO upon request. The following condition will satisfy this requirement:

- *All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201 and 4702]*

Section 6.3 identifies the source testing requirements. Engines retrofitted with exhaust control devices must comply with Sections 6.3.2 through 6.3.4 (source testing frequency, under normal conditions, source test protocol).The engines are fitted with catalytic convertors. The following conditions will be listed on the permit to ensure compliance:

- *Source testing of the NOx, CO and VOC emission concentrations shall be conducted within 60 days of initial startup and at least once every 24 months thereafter. [District Rules 4701 and 4702]*

- *{3791} Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702]*

- *{3792} 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. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% O_2. [District Rule 4702]*

Section 6.3.5 applies to engines combusting PUC-quality gas only where reoccurring VOC testing is not required – applicant has selected not to enjoy this exemption.

Section 6.3.6 (representative source testing) allows for representative source testing from an engine or engines that represents a specified group of engines, provided the necessary requirements are met. Representative source testing has not been proposed.

Section 6.4 specifies the required testing methods. The following conditions are listed on the permit to ensure compliance:

- *{3793} The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 18, 25A or 25B, or ARB Method 100. [District Rules 1081 and 4702] N*

- *{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]*

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

Section 6.5 requires that the operator of an engine subject to the requirements of Section 5.2 or the requirements of Section 8.0 shall submit to the APCO for approval an I&M plan that specifies all actions to be taken to satisfy the following requirements and the requirements of Section 5.8. The actions to be identified in the I&M plan shall include, but are not limited to, the requirements listed in Sections 6.5.2 through 6.5.9. If there is not change to the previously approved I&M plan, the operator shall submit a letter to the District indicating that previously approved plan is still valid.

Section 6.5.1 states the requirements of Section 6.5.2 through 6.5.9 shall apply to the following engines:

- Engines that have been retrofitted with an exhaust control device, except those certified per Section 9.0;
- Engines subject to Section 8.0;
- An AO spark-ignited engine that is subject to the requirements of Section 8.0;
- An AO spark-ignited engine that has been retrofitted with a catalytic emission control and is not subject to the requirements of Section 8.0.

The proposed engine has an exhaust control device. Therefore, Sections 6.5.2 through 6.5.9 apply.

Section 6.5.2 requires procedures for establishing ranges for control equipment parameters, engine operating parameters, and engine exhaust oxygen concentrations that source testing has shown result in pollutant concentrations within the rule limits.

Section 6.5.3 requires procedures for monthly inspections as approved by the APCO. The applicable control equipment parameters and engine operating parameters will be inspected and monitored weekly (proposed by the applicant) in conformance with a regular inspection schedule listed in the I&M plan. Such weekly inspection and monitoring of the control equipment and engine operating parameters will be accompanied by quarterly emissions monitoring as specified in the approved alternate monitoring plan.

Section 6.5.4 requires procedures for the corrective actions on the noncompliant parameter(s) that the owner or operator will take when an engine is found to be operating outside the acceptable range for control equipment parameters, engine operating parameters, and engine exhaust NOx, CO, VOC, or oxygen concentrations.

Section 6.5.5 requires procedures for the owner or operator to notify the APCO when an engine is found to be operating outside the acceptable range for control equipment parameters, engine operating parameters, and engine exhaust NOx, CO, VOC, or oxygen concentrations.

The alternate monitoring scheme proposed in Section 5.8.1 above will satisfy the requirements of Sections 6.5.2, 6.5.3, 6.5.4 and 6.5.5 of the rule. Therefore, compliance with Sections 6.5.2, 6.5.3, 6.5.4, and 6.5.5 is expected.

Section 6.5.6 requires procedures for preventive and corrective maintenance performed for the purpose of maintaining an engine in proper operating condition. The alternate monitoring procedure proposed in Section 5.6.1 above will satisfy the requirements of Section 6.5.6. Moreover, the applicant will operate and maintain engine according to the manufacturer's specifications:

- *This engine shall be operated and maintained in proper operating condition according to the manufacturer's specifications. [District Rule 4702]*

Section 6.5.7 requires procedures and a schedule for using a portable NOx analyzer to take NOx emission readings pursuant to Section 5.6.9. The alternate monitoring procedure proposed in Section 5.6.1 above will ensure compliance with the requirements of Section 6.5.7.

Section 6.5.8 requires procedures for collecting and recording required data and other information in a form approved by the APCO including, but not limited to, data collected through the I&M plan and the monitoring systems described in Sections 5.6.1 and 5.6.2. Data collected through the I&M plan shall have retrieval capabilities as approved by the APCO.

The data collection and recordkeeping requirement described in Section 6.2.1 above will satisfy the requirements of Section 6.5.8.

Section 6.5.9 specifies procedures for revising the I&M plan. The owner of an engine may request a change to the I&M plan at any time. The I&M plan shall be updated to reflect any change in operation and prior to any planned change in operation. An engine owner that changes significant I&M plan elements must notify the District no later than seven days after the change and must submit an updated I&M plan to the APCO no later than 14 days after the change for approval. The date and time of the change to the I&M plan shall be recorded in the engine operating log. For new engines and modifications to existing engines, the I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit-to-Operate. Therefore, the following condition will be listed on the ATC to ensure compliance with Section 6.5.9:

- *{3212} The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702]*

Section 7.0 describes compliance schedules.

Sections 7.1 and 7.2 are related to loss of exemption and permanent removal requirements, which are not applicable to this project.

Sections 7.3 and 7.4 apply to compression ignition engines, which is not applicable to this project.

Section 7.5 requires that non-AO spark ignited ICEs operate in compliance with the dates in Table 5 after the listed compliance dates.

Section 8.0 describes the Alternate Emissions Control Plan, which has not been proposed by the applicant.

Section 9.0 includes the Exhaust Control Certification Requirements – NSCR Certification, which has not been proposed by the applicant.

Compliance with Rule 4702 is expected.

Rule 4801 - Sulfur Compounds

The IC engine will be authorized to combust gas containing no more than 1.0 gr S/100scf. Compliance 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

District is a Responsible Agency

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

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

Kern County, as the lead agency, is the agency that will enforce the mitigation measures identified the EIR, including the mitigation requirements of the Oil and Gas ERA. As a responsible agency the District complies with CEQA by considering the EIR prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project involved (CCR §15096). The District has reviewed the EIR prepared by Kern County, the Lead Agency for the project, and finds it to be adequate. To reduce project related impacts on air quality, the District evaluates emission controls for the project such as Best Available Control Technology (BACT) under District Rule

2201 (New and Modified Stationary Source Review). In addition, the District is requiring the applicant to surrender emission reduction credits (ERC) for stationary source emissions above the offset threshold.

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

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The revision to the *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. Pending a successful NSR Public Noticing period, issue ATC S-8282-198-0 subject to the permit conditions on the attached draft ATC in **Appendix K**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-8282-198-0	3020-10-F	1,380 bhp	$820.00

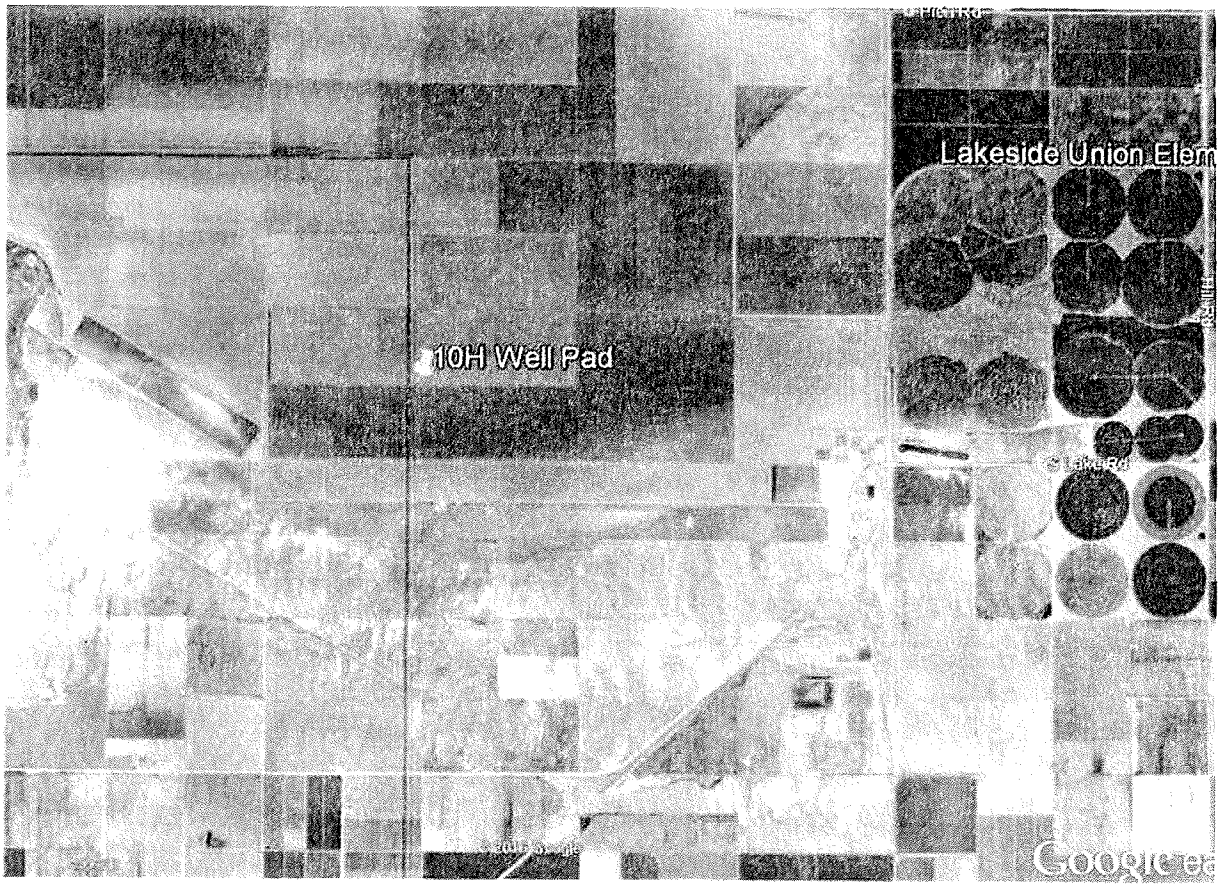
Appendices

A: Location Map
B: Source Test Results
C: Emissions Profile
D: SSPE1
E: QNEC Calculations
F: BACT Guideline
G: Top-down BACT Analysis
H: HRA Summary/AAQA
I: Statewide Compliance Statement and Title V Compliance Certification Form
J: Engine Specifications
K: Draft ATC

Appendix A

Location Map

Attachment A- Location Map



Appendix B

Source Test Results

San Joaquin Valley Air Pollution Control District

Source Test Results

Company: CALIFORNIA RESOURCES PRODUCTION CORP **Test Date:** 10/17/2017 **Pass** ☒ **Fail** ☐

Permit#: S-8282-190-0 **FacilityID:** 8282 **Unit ID:** GEN SET 11

Witnessed By: LAFOREG **Area Inspector:** SCOTTE

Reason For Testing:

Annual	☒	Initial	☒	CGA	☐	RATA	☐	Stationary/RATA	☐	QTR:	
ReTest	☐	RepTest	☐	AMS	☐	Dist Performed	☐	Unit Dormant	☐		
Postponed	☐										

Test Company: ENVIRONMENTAL SERVICES & TESTING **Project Number:** 002-20-17

Next Test: 10/17/2019 **Test Company Contact:** Mr. James Taplin

Equipment: 1380 HP FIELD GAS-FIRED WAUKESHA MODEL L5794GSI (OR EQ) WITH A THREE-WAY CATALYST POWERING AN ELECTRICAL GENERATOR

Equipment Type: IC Engine **Input Rate:** 1380.0 HP **Output Rate:**

Control Equipment:

Catalyst	☒	Scrubber	☐	Baghouse	☐	FGR	☐	O2	☒		
LoNOx	☐	Incin	☐	ESP	☐	H2O/Stm Inj	☐	NH3/SCR	☐		
DLN	☐	PSC	☐	PCC	☐	Rich Burn	☒	Lean Burn	☐		
Cyclone	☐	TEOR-Gas	☐								

Fuel Data And Operational Data:

Fuel Type: Nat. Gas **F-Factor:** 8748 **BTU:** 1368.0 BTU **Fuel Rate:** 222.0 MCFD

Second Fuel: **O2 % Stack:** 0.0 **Stack Flow:** 1844 **Process Rate:**

Comments:

ATC, No C/O

Enforcement Action: ☐ **NOV#:**

Report Rec: 12/07/2017 **Reviewed By:** LAFOREG **Results Sent Date:** 01/16/2018

Test Results:

Pollutant	Unit	Result	Limit	O2 Correction	Failed	Unit ID
CO	g/bhp-hr	0.029	0.6			Waukesha
CO	ppm	3.07	56.0	15		Waukesha
NOx	g/bhp-hr	0.002	0.07			Waukesha
NOx	ppm	0.12	5.0	15		Waukesha
VOC	g/bhp-hr	0.001	0.15			Waukesha
VOC	ppm	0.2	25.0	15		Waukesha

Appendix C

Emissions Profile

Application Emissions

Permit #: S-8282-198-0 Last Updated
Facility: CALIFORNIA RESOURCES PRODUCTION 01/24/2018 PROCOPIS

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	1866.0	248.0	1706.0	15990.0	3998.0
Daily Emis. Limit (lb/Day)	5.1	0.7	4.7	43.8	11.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	467.0	62.0	427.0	3998.0	1000.0
Q2:	467.0	62.0	427.0	3998.0	1000.0
Q3:	467.0	62.0	427.0	3998.0	1000.0
Q4:	467.0	62.0	427.0	3998.0	1000.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5	1.3	1.2		1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:	699.0	78.0	511.0		1499.0
Q2:	700.0	79.0	512.0		1499.0
Q3:	700.0	81.0	512.0		1499.0
Q4:	700.0	81.0	512.0		1500.0

Appendix D

SSPE1

Detailed SSPE Report

Region	*Facility*	*Unit*	*Mod*	*NOx*	*SOx*	*PM10*	*CO*	*VOC*	*Number of Outstanding ATCs*
S	382	0	4						0
S	382	7	10						0
S	382	29	5	0	0	0	0	2220	0
S	382	32	15	89615	3650	8497	386228	231790	0
S	382	62	15	89615	3650	8497	386228	231790	0
S	382	63	15	89615	3650	8497	386228	231790	0
S	382	68	10	0	0	0	0	6468	0
S	382	70	13	0	0	0	0	723	1
S	382	71	8						0
S	382	74	5	14299	579	1620	69318	11779	0
S	382	80	12	0	0	0	0	190	0
S	382	81	12	0	0	0	0	116	0
S	382	82	12	0	0	0	0	138	0
S	382	84	11	0	0	0	0		0
S	382	87	13	0	0	0	0	280	0
S	382	89	12	0	0	0	0	190	0
S	382	90	12	0	0	0	0	157	0
S	382	91	12	0	0	0	0	33	0
S	382	93	12	0	0	0	0	262	0
S	382	94	10	0	0	0	0	116	0
S	382	95	8	0	0	0	0	177	0
S	382	96	13	0	0	0	0	116	0
S	382	100	11	0	0	0	0	277	0
S	382	110	15	0	0	0	0	223	0
S	382	111	10	0	0	0	0	36	0
S	382	112	8	0	0	0	0	116	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	382	113	10	0	0	0	0	355	0
S	382	116	12	0	0	0	0	234	0
S	382	124	26	0	0	0	0	876	0
S	382	131	16	0	0	0	0	131	0
S	382	132	16	0	0	0	0	116	0
S	382	136	22	0	0	0	0	1022	1
S	382	138	8	0	0	0	0	277	0
S	382	139	12	0	0	0	0	628	0
S	382	140	12	0	0	0	0	365	0
S	382	156	12	0	0	0	0	2792	0
S	382	157	12	0	0	0	0	2792	0
S	382	158	18	0	0	0	0	4271	0
S	382	159	10	0	0	0	0	444	0
S	382	161	16	0	0	0	0	836	0
S	382	162	14	0	0	0	0	51	0
S	382	163	12	0	0	0	0	69	0
S	382	177	8	0	0	0	0	66	0
S	382	178	8	0	0	0	0	66	0
S	382	179	8	0	0	0	0	66	0
S	382	181	7						0
S	382	183	9	0	0	0	0	51	0
S	382	187	9	0	0	0	0	37	0
S	382	189	8	0	0	0	0	66	0
S	382	190	9	0	0	0	0	73	0
S	382	191	8	0	0	0	0	66	0
S	382	197	8	0	0	0	0	66	0
S	382	198	8	0	0	0	0	66	0
S	382	199	7	0	0	0	0	0	0
S	382	200	10	0	0	0	0	66	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	382	204	9	0	0	0	0	73	0
S	382	261	9	0	0	0	0	37	0
S	382	262	9	0	0	0	0	37	0
S	382	263	10	0	0	0	0	44	0
S	382	265	10	0	0	0	0	36	0
S	382	266	8	0	0	0	0	66	0
S	382	267	8	0	0	0	0	66	0
S	382	283	8	0	0	0	0	66	0
S	382	286	9	0	0	0	0	69	0
S	382	287	9	0	0	0	0	69	0
S	382	288	9	0	0	0	0	69	0
S	382	289	9	0	0	0	0	69	0
S	382	290	9	0	0	0	0	69	0
S	382	291	9	0	0	0	0	69	0
S	382	292	9	0	0	0	0	69	0
S	382	293	9	0	0	0	0	69	0
S	382	294	9	0	0	0	0	69	0
S	382	295	9	0	0	0	0	69	0
S	382	296	9	0	0	0	0	69	0
S	382	297	9	0	0	0	0	69	0
S	382	298	9	0	0	0	0	69	0
S	382	299	9	0	0	0	0	69	0
S	382	300	9	0	0	0	0	69	0
S	382	301	9	0	0	0	0	69	0
S	382	302	9	0	0	0	0	69	0
S	382	304	10	0	0	0	0	66	0
S	382	307	8	0	0	0	0	66	0
S	382	308	8	0	0	0	0	66	0
S	382	309	8	0	0	0	0	66	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	382	310	8	0	0	0	0	66	0
S	382	311	8	0	0	0	0	66	0
S	382	312	11	0	0	0	0	66	0
S	382	313	8	0	0	0	0	66	0
S	382	314	8	0	0	0	0	66	0
S	382	320	10	0	0	0	0	176	0
S	382	321	10	0	0	0	0	160	0
S	382	325	5						0
S	382	326	5	0	0	0	0	36	0
S	382	330	5						0
S	382	399	10	0	0	0	0	22	0
S	382	400	10	0	0	0	0	66	0
S	382	412	4						0
S	382	594	4						0
S	382	597	9	0	0	0	0	73	0
S	382	669	4						0
S	382	670	13	20236	18	1314	77263	29996	0
S	382	671	13	20236	18	1314	77263	29996	0
S	382	672	14	20236	18	1314	77263	29996	0
S	382	673	24	0	0	0	0	803	0
S	382	674	4						0
S	382	675	10	1080	64	228	1092	165	0
S	382	676	11	1080	64	228	1092	165	1
S	382	677	10	1080	86	228	1092	165	1
S	382	678	10	1080	86	228	1092	165	0
S	382	679	12	1080	86	228	1092	165	0
S	382	680	12	1080	86	228	1092	165	0
S	382	681	12	1080	86	228	1092	165	0
S	382	682	4						0

Notes:

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For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

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Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	382	683	5						0
S	382	684	4					5548	0
S	382	685	4					2883	0
S	382	701	9	0	0	0	0	183	0
S	382	702	9	0	0	0	0	183	0
S	382	703	4	0	0	0	0	0	0
S	382	705	3	0	0	0	0	0	0
S	382	706	3	0	0	0	0	0	0
S	382	707	3	0	0	0	0	0	0
S	382	708	3	0	0	0	0	0	0
S	382	711	4	0	0	0	0	0	0
S	382	712	4	0	0	0	0	0	0
S	382	713	4	0	0	0	0	0	0
S	382	724	4	0	0	0	0	164	0
S	382	725	4	0	0	0	0	47	0
S	382	726	10	0	0	0	0	352	0
S	382	727	6	0	0	0	0	74	0
S	382	736	4	0	0	0	0	0	0
S	382	737	7	0	0	0	0	344	0
S	382	738	4	0	0	0	0	73	0
S	382	741	7	0	0	0	0	365	0
S	382	742	7	0	0	0	0	365	0
S	382	743	7	0	0	0	0	365	0
S	382	744	7	0	0	0	0	365	0
S	382	745	7	0	0	0	0	365	0
S	382	746	7	0	0	0	0	365	0
S	382	751	5	0	0	0	0	672	0
S	382	757	6	1314	37	110	1095	1278	0
S	382	758	6	0	0	0	0	1314	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

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Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	382	759	6	0	0	0	0	99	0
S	382	760	5	0	0	0	0	99	0
S	382	806	6	0	0	40	0	0	0
S	382	808	6	0	0	0	0	73	0
S	382	809	3	0	0	0	0	73	0
S	382	810	3	36	0	1	7	1	0
S	382	811	2	0	0	0	0	73	0
S	382	814	2	0	0	0	0	37	0
S	382	815	3	96	0	3	24	41	0
S	382	830	2	0	0	0	0	110	0
S	382	831	2	0	0	0	0	110	0
S	382	840	2	0	0	0	0	73	0
S	382	841	2	0	0	0	0	73	0
S	382	842	2	0	0	0	0	73	0
S	382	843	2	0	0	0	0	146	0
S	382	844	2	0	0	0	0	146	0
S	382	845	2	0	0	0	0	146	0
S	382	847	1	404	0	4	26	9	0
S	382	858	3	1784	202	476	12133	3203	0
S	382	859	3	1784	202	476	12133	3203	0
S	382	867	2	0	0	0	0	264	0
S	382	868	2	0	0	0	0	264	0
S	382	869	2	0	0	0	0	264	0
S	382	870	2	0	0	0	0	178	0
S	382	871	2	0	0	0	0	178	0
S	382	872	2	0	0	0	0	178	0
S	382	873	2	0	0	0	0	178	0
S	1216	0	2						0
S	1216	64	6	0	0	0	0	110	0

Notes:

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Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	1216	66	2	0	0	0	0	33	0
S	1216	71	4	1998	314	571	13700	3498	0
S	1216	72	2	0	0	0	0	37	0
S	1216	73	2	0	0	0	0	37	0
S	1216	75	2	0	0	0	0	37	0
S	1216	78	2	0	0	0	0	37	0
S	1216	158	2	0	0	0	0	77	0
S	1216	159	2	0	0	0	0	77	0
S	1216	172	1	0	0	0	0	320	0
S	1216	174	1	0	0	0	0	283	0
S	1216	175	1	0	0	0	0	150	0
S	1216	176	1	0	0	0	0	173	0
S	1216	177	1	0	0	0	0	151	0
S	1738	0	4						0
S	1738	2	13	0	0	0	0	62	0
S	1738	7	16						0
S	1738	9	6						0
S	1738	10	6						0
S	1738	12	6						0
S	1738	13	6						0
S	1738	16	6						0
S	1738	17	6						0
S	1738	22	9	0	0	0	0	100	0
S	1738	23	5						0
S	1738	24	5						0
S	1738	30	5						0
S	1738	31	5						0
S	1738	37	10	0	0	0	0	0	0
S	1738	38	7						0

Notes:

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Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	1738	44	6						0
S	1738	45	7	0	0	0	0	0	0
S	1738	47	7						0
S	1738	48	5						0
S	1738	49	10	0	0	0	0	256	0
S	1738	50	6						0
S	1738	52	8						0
S	1738	53	6						0
S	1738	57	13	576	188	38	54812	2489	0
S	1738	58	14	635	221	635	59370	1366	0
S	1738	59	12	615	40	40	58446	1354	0
S	1738	60	13	603	217	293	68288	1567	0
S	1738	62	14	603	217	293	68288	1567	0
S	1738	77	8	0	0	0	0	0	0
S	1738	78	9	2249	0	0	14600	7300	0
S	1738	87	14	635	221	635	68288	1567	0
S	1738	88	11	565	203	275	64020	2900	0
S	1738	92	14	596	207	282	53186	2409	0
S	1738	93	11	596	37	256	64021	2884	0
S	1738	94	11	565	203	275	64020	2900	0
S	1738	97	13	495	9	197	53186	2409	1
S	1738	111	10	6498	229	438	119830	25550	0
S	1738	118	16	2628	183	256	64021	4526	0
S	1738	122	15	596	207	282	64020	2900	0
S	1738	124	11	565	203	275	64020	2900	0
S	1738	130	9	2671	0	0	649334	0	0
S	1738	131	12	596	125	237	64020	2900	0
S	1738	133	13	565	203	275	64020	2900	0
S	1738	134	14	565	203	275	64020	2900	0

Notes:

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Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	1738	135	18	1971	146	183	48253	3395	1
S	1738	136	13	565	203	275	64020	2900	1
S	1738	188	5						0
S	1738	190	4						0
S	1738	201	8	0	0	0	0	0	0
S	1738	211	5	0	0	0	0	666	0
S	1738	212	5	0	0	0	0	1560	0
S	1738	226	6						0
S	1738	239	5	0	0	0	0	666	0
S	1738	240	11	0	0	0	0	337	0
S	1738	241	6						0
S	1738	242	6						0
S	1738	243	6						0
S	1738	244	6						0
S	1738	245	6						0
S	1738	246	6						0
S	1738	279	5	2323	0	260	12642	957	0
S	1738	288	8						0
S	1738	289	7						0
S	1738	290	7						0
S	1738	297	4						0
S	1738	335	4	0	0	0	0	512	0
S	1738	338	4						0
S	1738	339	4						0
S	1738	340	3	0	0	0	0	0	0
S	1738	342	3	0	0	0	0	800	0
S	1738	345	7	1782	641	867	201909	1425	0
S	1738	346	6	460	32	111	1681	428	0
S	1738	347	1	956	7	113	5203	923	0

Notes:

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Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	1738	349	2	7665	0	897	41180	7002	0
S	1738	354	4	0	0	0	0	0	0
S	1738	355	2						0
S	1738	356	2						0
S	1738	357	2						0
S	1738	358	2						0
S	1738	359	4	635	221	635	68288	1848	0
S	1738	360	4	635	221	635	68288	763	0
S	1738	361	5	635	221	635	68288	1848	0
S	1738	362	4	635	221	635	103745	1526	0
S	1738	363	6	965	67	458	103745	1526	0
S	1738	364	7	965	67	458	103745	1526	0
S	1738	365	6	635	221	635	103745	1526	0
S	1738	366	4	635	221	635	103745	1526	0
S	1738	367	4	469	169	228	53186	782	0
S	1738	368	4	635	221	635	58510	4198	0
S	1738	369	4	469	169	228	53186	782	0
S	1738	371	4	635	221	635	68288	1848	0
S	1738	372	4	419	3	31	3076	502	0
S	1738	373	4	903	3	31	3076	502	0
S	1738	374	5	495	3	31	3076	502	0
S	1738	375	6	495	3	31	3076	502	0
S	1738	376	3	903	3	31	3076	502	1
S	1738	377	6	903	3	31	3076	502	0
S	1738	378	3	913	0	37	3066	511	1
S	1738	379	4	903	3	31	3076	502	1
S	1738	380	6	903	3	31	3076	502	0
S	1738	381	4	495	3	31	3076	502	0
S	1738	382	3	903	3	31	3076	502	1

Notes:

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ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

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Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	1738	383	4	495	3	31	3188	519	0
S	1738	384	3	903	3	31	3076	502	1
S	1738	385	3	1095	3	31	3723	594	1
S	1738	386	4	495	3	31	3076	502	0
S	1738	387	4	494	3	31	3222	522	0
S	1738	388	4	903	3	31	3076	502	0
S	1738	389	4	479	31	31	3188	519	0
S	1738	390	4	495	3	31	3076	502	0
S	1738	391	4	479	31	31	3188	519	0
S	1738	392	4	903	3	31	3076	502	0
S	1738	393	5	479	31	31	3188	519	0
S	1738	394	6	479	31	31	3188	519	0
S	1738	395	4	479	31	31	3188	519	0
S	1738	396	6	479	31	31	3188	519	0
S	1738	397	4	479	31	31	3188	519	0
S	1738	398	4	479	31	31	3188	519	0
S	1738	399	4	479	31	31	3188	519	0
S	1738	400	4	479	31	31	3188	519	0
S	1738	401	4	495	3	31	3076	502	1
S	1738	402	6	479	31	31	3188	519	0
S	1738	403	4	495	3	31	3076	502	1
S	1738	404	6	495	3	31	3723	594	0
S	1738	405	6	495	3	31	3076	502	0
S	1738	406	4	479	31	31	3188	519	0
S	1738	407	6	479	31	31	3188	519	0
S	1738	408	2	825	0	13	101	31	0
S	1738	409	2	2149	57	50	354	93	0
S	1738	410	5	495	3	31	3076	502	0
S	1738	431	1	0	0	0	0	122	0

Notes:

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Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	1738	443	7	0	0	0	0	6680	0
S	1738	444	2						0
S	1738	445	2						0
S	1738	446	2						0
S	1738	447	2						0
S	1738	448	6	532	35	556	50596	1995	0
S	1738	449	3	17870	426	2102	97236	16556	0
S	1738	450	6	281	18	294	26703	1908	0
S	1738	455	2	5549	700	653	30192	5141	0
S	1738	456	1	0	0	0	0	683	0
S	1738	457	1	0	0	0	0	661	0
S	1738	458	1	0	0	0	0	661	0
S	1738	459	1	0	0	0	0	661	0
S	1738	460	1	0	0	0	0	45	0
S	1738	462	1	7	0	0	35	3	0
S	1738	470	0	274	197	45	1660	477	0
S	1738	471	0	274	197	45	1660	477	0
S	1738	472	0	274	197	45	1660	477	0
S	1738	473	0	274	197	45	1660	477	0
S	1738	474	0	274	197	45	1660	477	0
S	1738	475	0	274	197	45	1660	477	0
S	1738	476	0	274	197	45	1660	477	0
S	1738	477	0	274	197	45	1660	477	0
S	1738	478	2	274	197	45	1660	477	0
S	1738	479	0	274	197	45	1660	477	0
S	1738	480	0	274	197	45	1660	477	0
S	1738	481	2	274	197	45	1660	477	0
S	1738	482	0	274	197	45	1660	477	0
S	1738	483	0	274	197	45	1660	477	0

Notes:

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Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	1738	485	1	0	0	0	0	63	0
S	1738	492	1	0	0	0	0	162	0
S	1738	496	0	7097	432	2468	2468	1234	0
S	1738	497	0	7097	432	2468	2468	1234	0
S	1738	509	1	0	0	0	0	90	0
S	1738	510	0	0	0	0		255	0
S	1738	511	0	0	0	0	0	73	0
S	1738	512	0	0	0	0	0	73	0
S	1738	513	0	0	0	0	0	73	0
S	1738	514	0	2920	110	329	15917	2701	0
S	1738	515	1	0	0	0	0	37	0
S	8282	0	1						0
S	8282	7	1	0	0	0	0	0	0
S	8282	8	1	0	0	0	0	0	0
S	8282	9	4	0	0	0	0	88	0
S	8282	10	2	0	0	0	0	567	1
S	8282	11	1	0	0	0	0	88	0
S	8282	12	1	0	0	0	0	584	0
S	8282	17	4	0	0	0	0	17934	1
S	8282	18	1						0
S	8282	19	2	0	0	0	0	1466	1
S	8282	23	3	0	0	0	0	376	0
S	8282	24	3	0	0	0	0	37	0
S	8282	25	3	0	0	0	0	37	0
S	8282	28	1	0	0	0	0	73	0
S	8282	30	6	0	0	0	0	153	0
S	8282	31	3	0	0	0	0	29	0
S	8282	33	3	0	0	0	0	22	0
S	8282	42	3	0	0	0	0	37	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	8282	43	1	0	0	0	0	37	0
S	8282	44	1	0	0	0	0	29	0
S	8282	47	5	0	0	0	0	637	0
S	8282	50	1	0	0	0	0		0
S	8282	53	1						0
S	8282	54	3	0	0	0	0	88	0
S	8282	55	4	0	0	0	0	47	0
S	8282	57	3	0	0	0	0	18	0
S	8282	58	3	0	0	0	0	33	0
S	8282	60	3	0	0	0	0	22	0
S	8282	61	1	2253	172	228	54750	3911	0
S	8282	62	1	1825	110	183	44311	3139	0
S	8282	63	1	2628	183	256	64021	4526	0
S	8282	66	2	0	0	0	0	125	0
S	8282	68	1						0
S	8282	69	1	1971	146	183	48253	3395	0
S	8282	70	1	1971	146	183	48253	3395	0
S	8282	71	1	1971	146	183	48253	3395	0
S	8282	72	1	1825	123	164	44321	3139	0
S	8282	73	2	0	0	0	0	125	0
S	8282	74	2	0	0	0	0	125	0
S	8282	75	2	0	0	0	0	73	0
S	8282	76	1	0	0	0	0	37	0
S	8282	77	2	0	0	0	0	60	0
S	8282	78	2	0	0	0	0	37	0
S	8282	79	2	0	0	0	0	4	0
S	8282	80	2	0	0	0	0	219	0
S	8282	81	2	0	0	0	0	146	0
S	8282	83	2	0	0	0	0	219	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	8282	84	2	0	0	0	0	146	0
S	8282	85	2	0	0	0	0	219	0
S	8282	86	2	0	0	0	0	95	0
S	8282	87	3	0	0	0	0	146	0
S	8282	88	3	0	0	0	0	146	0
S	8282	89	2	0	0	0	0	37	0
S	8282	100	2	0	0	0	0	147	0
S	8282	101	2	0	0	0	0	0	0
S	8282	102	2	0	0	0	0	73	0
S	8282	103	2	0	0	0	0	0	0
S	8282	104	2	0	0	0	0	0	0
S	8282	105	2	0	0	0	0	0	0
S	8282	106	2	0	0	0	0	0	0
S	8282	107	2	0	0	0	0	73	0
S	8282	108	2	0	0	0	0	37	0
S	8282	109	2	0	0	0	0	168	0
S	8282	113	9	0	0	0	0	161	1
S	8282	114	2	0	0	0	0	44	0
S	8282	115	2	0	0	0	0	44	0
S	8282	116	2	0	0	0	0	44	0
S	8282	117	2	0	0	0	0	44	0
S	8282	118	2	0	0	0	0	44	0
S	8282	122	8	0	0	0	0	161	0
S	8282	124	2	569	43	132	727	104	0
S	8282	125	2	569	43	132	727	104	0
S	8282	126	1	0	0	0	0	1521	0
S	8282	135	1	8059	491	2083	2803	1439	0
S	8282	136	1	8059	491	2083	2083	1439	0
S	8282	137	2	0	0	0	0	54	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	8282	138	2	0	0	0	0	31	0
S	8282	139	2	0	0	0	0	45	0
S	8282	140	2	0	0	0	0	37	0
S	8282	141	2	8059	491	2803	2803	1402	0
S	8282	142	2	8059	491	2803	2803	1402	0
S	8282	143	0	8059	491	2803	2803	1402	0
S	8282	144	0	8059	491	2803	2803	1402	0
S	8282	157	2	0	0	0	0	73	0
S	8282	158	2	0	0	0	0	73	0
S	8282	159	2	0	0	0	0	73	0
S	8282	160	2	0	0	0	0	73	0
S	8282	161	2	0	0	0	0	73	0
S	8282	165	2	0	0	0	0	110	0
S	8282	166	1	0	0	0	0	0	0
S	8282	167	1	0	0	0	0	0	0
S	8282	168	1	0	0	0	0	0	0
S	8282	169	1	0	0	0	0	0	0
S	8282	170	1	0	0	0	0	0	0
S	8282	171	1	0	0	0	0	0	0
S	8282	172	1	0	0	0	0	0	0
S	8282	173	1	0	0	0	0	0	0
S	8282	174	1	0	0	0	0	0	0
S	8282	175	1	0	0	0	0	0	0
S	8282	176	1	0	0	0	0	0	0
S	8282	177	1	0	0	0	0	0	0
S	8282	178	1	0	0	0	0	73	0
S	8282	179	1	0	0	0	0	37	0
S	8282	180	1	0	0	0	0	37	0
S	8282	181	1	0	0	0	0	98	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	8282	182	1	0	0	0	0	98	0
S	8282	183	1	0	0	0	0	125	0
S	8282	184	1	0	0	0	0	125	0
S	8282	185	1	0	0	0	0	125	0
S	8282	186	1	0	0	0	0	125	0
S	8282	187	1	0	0	0	0	125	0
S	8282	188	1	0	0	0	0	12	0
S	8282	189	1	0	0	0	0	0	0
S	8282	190	0	1599	248	1706	10874	2772	0
S	8282	191	0	1599	248	1706	10874	2772	0
S	8454	0	1						0
S	8454	1	1	0	0	0	0	7191	0
S	8454	2	1	0	0	0	0	3686	0
S	8454	3	1						0
S	8454	4	1						0
S	8454	5	1						0
S	8454	6	1	5950	40990	657	32412	292	0
S	8454	7	1	0	0	0	0	4380	0
S	8454	8	1	0	0	0	0	840	0
S	8454	9	1	0	0	0	0	1452	0
S	8454	10	1	0	0	0	0	0	0
S	8454	11	1	0	0	0	0	0	0
S	8454	12	1	0	0	0	0	1342	0
S	8454	13	1	0	0	0	0	1342	0
S	8454	14	1					897	0
S	8454	15	1					18704	0
S	8454	16	2	0	0	0	0	642	0
S	8454	17	2	0	0	0	0	627	0
S	8454	20	0	1752	3504	1664	4052	1205	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	8454	21	0	1722	3504	1664	4052	1205	0
	SSPE (lbs)			553356	77273	83880	5480108	1154624	

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Appendix E

QNEC Calculations

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.1 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year

$PE1_{quarterly}$= $PE1_{annual}$ ÷ 4 quarters/year
= 0 (new unit)

Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NO_X	466.5	0	466.5
SO_X	62	0	62
PM_{10}	426.5	0	426.5
CO	3997.5	0	3997.5
VOC	999.5	0	999.5

Appendix F

BACT Guideline

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.3.12*

Last Update: 3/19/2015

Non-Agricultural Fossil** Fuel-Fired IC Engines > 50 bhp

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1. For all compression-ignited engines: Use of an engine meeting the latest Tier standard 2. For all spark-ignited engines: 25 ppmvd @ 15% O2 or 0.15 g/bhp-hr	1. For all compression-ignited engines: 50 percent reduction of latest Tier standard for VOC emissions using a catalytic oxidation system. 2. For rich-burn spark-ignited engines: 12 ppmvd @ 15% O2 or 0.069 g/bhp-hr	Electric Motor (except for engines that will be used to generate electricity)
SOx	Compliance with District Rule 4702 SOx Emission Control Requirements		Electric Motor (except for engines that will be used to generate electricity)
PM10	0.06 g/bhp-hr (Total PM)***		Electric Motor (except for engines that will be used to generate electricity)
NOx	0.07 g/bhp-hr or 5 ppmvd @ 15% O2		1. 2 ppmvd @ 15% O2 Natural Gas-Fired Turbine 2. Electric Motor (except for engines that will be used to generate electricity)
CO	1. For compression-ignited engines > 300 bhp and < or = 500 bhp: 49 ppmvd @ 15% O2 2. For compression-ignited engines > 500 bhp: 23 ppmvd @ 15% O2 3. For four stroke lean burn spark-ignited engines > 500 bhp: 47 ppmvd @ 15% O2 4. For all engines rated > or = 2,064 bhp: 33 pmvd @ 15% O2 5. For all other engines (not included in categroies 1 through 4 above): 56 ppmvd @ 15% O2 or 0.6 g/bhp-hr	For all compression-ignited engines: 12 ppmvd @ 15% O2 using an oxidation catalyst	Electric Motor (except for engines that will be used to generate electricity)

** For the purposes of this determination, fossil fuels includes diesel, gasoline, natural gas, propane, kerosene, and similar hydrocarbon compounds derived from petroleum oil or natural gas. Fossil fuels also include similar synthetic fuels such as biodiesel and/or any fuel containing one or more fossil fuels.

***This total PM10 emission limit is based on EPA Method 5 (front hald and back half) testing, which typically yields results as much as four times higher than when using the ISO 8178 Test Method. The ISO 8178 Test Method only reports filterable (i.e. front half) emissions.

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

***This is a Summary Page for this Class of Source**

Appendix G

Top-Down BACT Analysis

Top-Down BACT Analysis

BACT Guideline 3.3.12, applies to Non-agricultural Fossil Fuel-Fired IC Engines > 50 hp

NOx Emissions

Step 1 – Identify All Control Technologies

- 5 ppmv NOx @ 15% O_2 or 0.07 g/bhp-hr, as Achieved-in-Practice.

- Use of a natural gas-fired turbine with a NOx emission rate of 2 ppmv, as Alternate Basic Equipment

Step 2 – Eliminate Technologically Infeasible Options

The alternate basic equipment option, the use of gas turbines meeting 2 ppmv NOx, was intended for projects with 3 MW of electrical output, or greater. Turbines smaller than 3 MW are typically not capable of meeting a 2 ppmv NOx emission limit. Rather, units smaller than 3 MW typically achieve emission limits that are equivalent to the achieved in practice option of 0.15 g/bhp-hr. Therefore, no NOx emission reductions are expected if the electrical output from the unit is less than 3 MW. The proposed engine will have an electrical output of approximately 1 MW each. Therefore, the gas turbine option is not expected to result in lower emissions and will be eliminated from consideration for this project.

The remaining control technologies from Step 1 are technologically feasible.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

- 5 ppmv NOx @ 15% O_2 or 0.07 g/bhp-hr.

Step 4 – Cost Effectiveness Analysis

The applicant is proposing the most stringent control technology from Step 3 above. Therefore, no cost-effectiveness analysis is required.

Step 5 – Select BACT

BACT for the engine is an emission limit of 5 ppmv NOx @ 15% O_2 or 0.07 g/bhp-hr.

PM10 Emissions

Step 1 – Identify All Control Technologies

- 0.06 g/bhp-hr as Achieved-in-Practice.

No other options are listed as Technologically Feasible or Alternate Basic Equipment.

Step 2 – Eliminate Technologically Infeasible Options

All options are technologically feasible and none will be eliminated.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

a) 0.06 g/bhp-hr

Step 4 – Cost Effectiveness Analysis

The applicant is proposing the most stringent control technology from Step 3 above. Therefore, no cost-effectiveness analysis is required.

Step 5 – Select BACT

BACT for the engine is an emission limit of 0.06 g/bhp-hr.

CO Emissions

Step 1 – Identify All Control Technologies

- 56 ppmv @ 15% O2 or 0.6 g/bhp-hr.

No other options are listed as Technologically Feasible or Alternate Basic Equipment.

Step 2 – Eliminate Technologically Infeasible Options

All options are technologically feasible and none will be eliminated.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

- 56 ppmv @ 15% O2 or 0.6 g/bhp-hr

Step 4 – Cost Effectiveness Analysis

The applicant is proposing the most stringent control technology from Step 3 above. Therefore, no cost-effectiveness analysis is required.

Step 5 – Select BACT

BACT for the engine is an emission limit of 56 ppmv @ 15% O2 or 0.6 g/bhp-hr.

VOC Emissions

Step 1 – Identify All Control Technologies

- 25 ppmv VOC @ 15% O_2 or 0.15 g/bhp-hr, as Achieved-in-Practice
- 12 ppmv @ 15% O2 or 0.069 g/bhp-hr, as Technologically Feasible

Step 2 – Eliminate Technologically Infeasible Options

None of the above technologies is technologically infeasible.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

a) 12 ppmv VOC @ 15% O_2
b) 25 ppmv VOC @ 15% O_2

Step 4 – Cost Effectiveness Analysis

The IC engine manufacturer has stated that to install the catalytic oxidation system, N-pentane and N-butane would need to be removed from the fuel gas. To accomplish this an additional gas compressor, a refrigeration skid, instrumentation, PLCs, piping, and mechanical construction would be required. However, to meet the Technologically Feasible BACT, CRC would need to spend approximately $1.3 million on the refrigeration skid and supporting equipment, and an additional $25,000 per year on operational and maintenance costs. Detailed costs are included in the table below.

The annual amount of VOC reduced is calculated below.

[(0.15 – 0.069) g/hp-hr x 1,380 hp x 8760 hr/yr] / (453.6 g/lb x 2000 lb/ton) = 1.1 ton/yr

Based on the capital and operational costs and a reduction of 1 ton/yr, as calculated above, the cost effectiveness of the Technologically Feasible BACT is $ 239,131 per ton, which exceeds the District's threshold of $17,500 per ton.

BACT Cost Effectiveness Worksheet

Capital Costs (P) to be financed (supplied by applicar	$1,315,744.06	(1)	Estimated
Interest rate for financing (assume 10%)	0.10	(i)	
time period of financing (assume 10 years)	10	(n)	
annualization factor = $i(1+i)^n$	0.16	(2)	
annualized capital costs [Calculated as (1) X (2)]	$214,131.29	(3)	
annual cost of operation and maintenance	$25,000.00	(4)	
total cost of control technology [(3) + (4)]	$239,131.29	(5)	
tons/year reduced by control technology being analy	1.00	(6)	Difference in VOC from 25 to 12 ppm
cost effectiveness ($/ton) [(5) / (6)]	$239,131.29	(7)	

Pollutant	Cost Effectiveness Threshold
VOC	$ 17,500.00

California Resources Corporation
BV Nose Field Development
10H Gas Dehydration Skid Installation
Class 4 - **Cost** Estimate

5-Feb-17 Rev A

Description	Qty	Unit	Equip /Mat [US$]	Labor [US$]	Total [US$]
1 *ENGINEERING*					$ 91,416.46
Mechanical & Civil Engineering	1	Lot	$ -	$ 55,094.74	$ 55,094.74
Electrical & Automation Engineering	1	Lot	$ -	$ 36,321.72	$ 36,321.72
2 *HES & PERMITS*					$ -
Air Permit	1	EA		$ -	$ -
GHG & ERCs	1	Lot			$ -
County Permits	2	EA		$	$ -
3 *PROCUREMENT*					$ 602,003.00
Gas Compressor	2	EA	$ 240,000.00		$ 240,000.00
Refrigeration Skid	1	EA	$ 250,000.00	$ -	$ 250,000.00
Instruments	1	Lot	$ 42,000.00	$ -	$ 42,000.00
PLC	1	EA	$ 30,000.00	$ -	$ 30,000.00
Bulk Materials - Mechanical	1	Lot	$ 25,000.00	$ 1.00	$ 25,001.00
Bulk Materials - Electrical	1	Lot	$ 15,000.00	$ 2.00	$ 15,002.00
4 *CONSTRUCTION*					$ 393,270.00
Set Equipment, Structural & Civil	1	Lot	$ -	$ 60,270.00	$ 60,270.00
Piping & Mechanical Construction	1	Lot	$ -	$ 200,000.00	$ 200,000.00
Electrical Construction	1	Lot	$	$ 102,900.00	$ 102,900.00
Automation & Programming	1	Lot	$ -	$ 29,200.00	$ 29,200.00
5 *COMMISSIONING & START-UP*					$ 25,000.00
Commissioning & Start-up	1	Lot	$	$ 15,000.00	$ 15,000.00
Vendor Support	1	Lot	$ -	$ 10,000.00	$ 10,000.00
6 *CONTINGENCY (20%)*	1	Lot	$ 120,400.00	$ 83,654.60	$ 204,054.60
CLASS 4 - TOTAL INSTALLED COST			$ 722,400.00	$ 593,344.06	$ 1,315,744.06
INSTALL ONLY WITHOUT EQUIPMENT COSTS					$ 713,744.06

Step 5 – Select BACT

BACT for the engine is an emission limit of 25 ppmv VOC @ 15% O_2 or 0.15 g/bhp-hr.

Appendix H

HRA Summary/ AAQA

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Silvana Procopio – Permit Services
From:	Seth Lane – Technical Services
Date:	January 9, 2018
Facility Name:	California Resources Elk Hills, LLC
Location:	NW/4 Section 10, T32S, R25E
Application #(s):	S-8282-198-0
Project #:	S-1173681

A. RMR SUMMARY

RMR Summary						
Units	**Prioritization Score**	**Acute Hazard Index**	**Chronic Hazard Index**	**Maximum Individual Cancer Risk**	**T-BACT Required?**	**Special Permit Requirements?**
Unit 198-0 (NG ICE)	0.11	0.01	0.00	2.80E-07	No	Yes
Project Totals	0.11	0.01	0.0	2.80E-07		
Facility Totals	>1	0.90	0.04	1.99E-05		

Proposed Permit Requirements

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

Unit # 198-0

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

B. RMR REPORT

I. Project Description

Technical Services received a request on December 19, 2017, to perform an Ambient Air Quality Analysis and a Risk Management Review for a 1380 BHP natural gas-fired IC engine for electrical generation.

II. Analysis

Toxic emissions for this proposed unit were calculated using 2000 AP42 emission factors for Natural Gas Fired internal combustion 4 Stroke Rich Burn Engine . (The use of a catalyst reduces TACs by 76% (NESHAP), and input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines. The prioritization score for this proposed facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required. The AERMOD model was used, with the parameters outlined below and meteorological data for 2004-2008 from Missouri Triangle 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:

Analysis Parameters **Unit 198-0 1380 BHP NG ICE**			
Source Type	Point	**Location Type**	Rural
Stack Height (m)	5.33	**Closest Receptor (m)**	>1000
Stack Diameter. (m)	0.36	**Type of Receptor**	Residential
Stack Exit Velocity (m/s)	32.07	**Max Hours per Year**	8760
Stack Exit Temp. (°K)	918	**Fuel Type**	NG
Fuel Usage (mmscf/hr)	0.01	**Fuel Usage (mmscf/yr)**	87.82

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

Unit #	**NO_x (Lbs.)**		**SO_x (Lbs.)**		**CO (Lbs.)**		**PM_{10} (Lbs.)**	
	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.
198-0	0.21	1,866	0.03	248	1.83	15,990	0.19	1,706

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

	Background Site	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Bakers-Muni (2016)	Pass	X	Pass	X	X
NO_x	Bakers-California (2016)	Pass[1]	X	X	X	Pass
SO_x	Fresno – Garland (2016)	Pass	Pass	X	Pass	Pass
PM_{10}	Bakers-California (2016)	X	X	X	Pass[2]	Pass[2]
$PM_{2.5}$	Bakers-Airport (2016)	X	X	X	Pass[3]	Pass[3]

*Results were taken from the attached PSD spreadsheet.
[1]The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.
[2]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).
[3]The court has vacated EPA's $PM_{2.5}$ SILs. Until such time as new SIL values are approved, the District will use the corresponding PM_{10} SILs for both PM_{10} and $PM_{2.5}$ analyses.

III. Conclusion

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

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.

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

IV. Attachments

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

Appendix I

Statewide Compliance Statement and Title V Compliance Certification Form

CALIFORNIA
RESOURCES CORPORATION

January 26, 2018

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

Subject: California Resources Production 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 Production Corporation (CRPC) and its affiliates.

CRPC has Notices of Violation outstanding issued by your office. However, all issues associated with the Notices of Violation have been addressed. Affiliated companies of CRPC 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 CRPC and affiliated company major stationary sources in the State of California by employees of CRPC 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 Manager-North CRC

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

☐ SIGNIFICANT PERMIT MODIFICATION
☒ MINOR PERMIT MODIFICATION
☐ ADMINISTRATIVE AMENDMENT

COMPANY NAME: California Resources Corporation	FACILITY ID: S-8282
1. Type of Organization: ☒ Corporation ☐ Sole Ownership ☐ Government ☐ Partnership ☐ Utility	
2. Owner's Name: California Resources Corporation	
3. Agent to the Owner:	

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

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

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

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

(JR) Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true, accurate, and complete.

(JR) For minor modifications, this application meets the criteria for use of minor permit modification procedures pursuant to District Rule 2520.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Signature of Responsible Official

11-6-17
Date

Jim Robinson
Name of Responsible Official (please print)

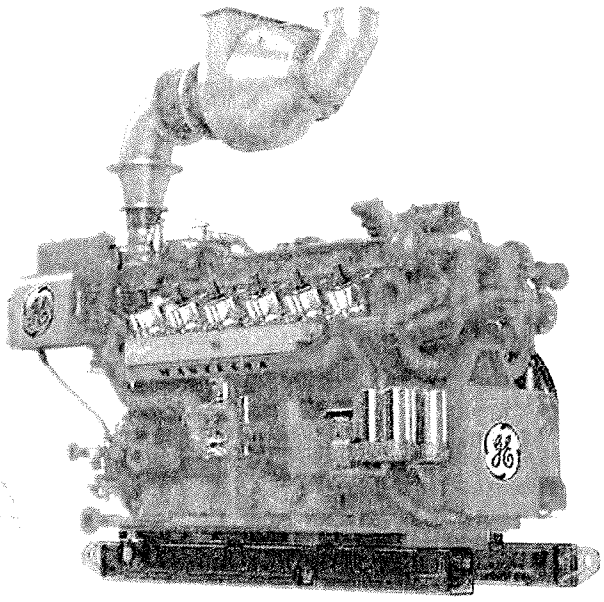
VP, HSE
Title of Responsible Official (please print)

Re: TV Minor Modification Application for 3rd BV Nose 10H Gen Set

Appendix J

Engine Specifications

GE Power & Water



Waukesha gas engines
VHP® Series Four™
L5794/L7044GSI EPA

multi-fuel mobile power generation

With over 100 years of engine design, development and manufacturing experience, GE's Waukesha gas engines are redefining oil field power generation in drill rig applications with a non-road EPA mobile certified solution that provides diesel-like performance, fuel flexibility to run on natural gas/field gas and low emissions output for excellent engine performance.

Operation – runs and provides power like a diesel without the cost of diesel fuel
Flexibility – reliable, proven fuel flexibility across a wide Btu range
Emissions – lower emissions than diesel
Mobility – non-road mobile certified by the EPA
Power – maintains consistent power output across changing field conditions

standard engine features

1. Flywheel machined for generator coupling
2. Inlet water header
3. Dresser coupling
4. Auxiliary water thermostatic valve
5. Main bearing temperature sensors
6. Exhaust temperature sensors
7. Front stub shaft
8. Standard air/gas starter, optional electric starter
9. Three-way catalytic converter, includes housing, elements, flexibile bellows; integrated catalyst silencer option
10. I/O box with display and MIL functionality
11. Single point fuel Inlet
12. 5 spin-on oil filters
13. Closed breather system

technical data

L5794GSI EPA	
Cylinders	V12
Piston displacement	5788 cu. in. (95 L)
Compression ratio	8.25:1
Bore & stroke	8.5" x 8.5" (216 x 216 mm)
Jacket water system capacity	107 gal. (405 L)
Lube oil capacity	190 gal. (719 L)
Starting system	90 - 150 psi air/gas; optional 24V electric

L7044GSI EPA	
Cylinders	V12
Piston displacement	7040 cu. in. (115 L)
Compression ratio	8:1
Bore & stroke	9.375" x 8.5" (238 x 216)
Jacket water system capacity	100 gal. (379 L)
Lube oil capacity	190 gal. (719 L)
Starting system	90 - 150 psi air/gas; optional 24V electric

imagination at work

engine power ratings at site conditions

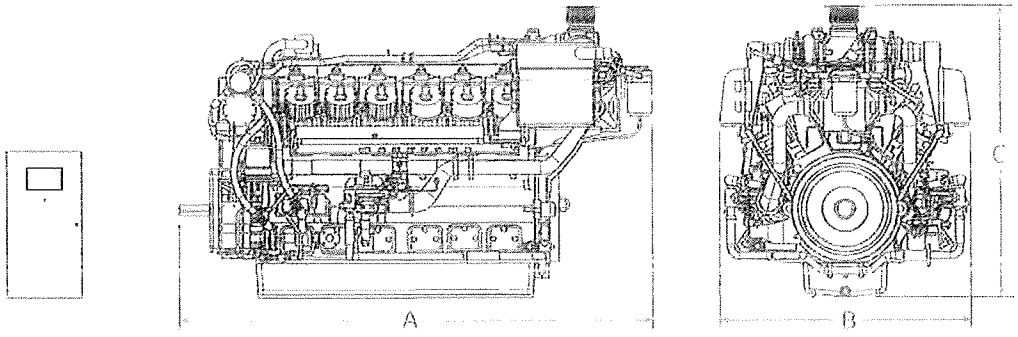
77	1380	1380	1380	1380	1380	1380	1380	1376
86	1380	1380	1380	1380	1380	1380	1380	1376
100	1380	1380	1380	1380	1380	1380	1380	1376
104	1374	1374	1374	1374	1374	1374	1374	1374
120	1352	1352	1352	1352	1352	1352	1352	1352

77	1680	1680	1680	1680	1680	1680	1680	1675
86	1680	1680	1680	1680	1680	1680	1680	1627
100	1680	1680	1680	1680	1680	1680	1680	1515
104	1673	1673	1673	1673	1673	1673	1663	1476
120	1646	1646	1646	1646	1620	1593	1481	1289

Fuel Standard: All natural gas engine ratings are based on 900 BTU/ft³ (35 38 MJ/m³ [25, V(0; 101 325])) SLHV, 91 WKI minimum, commercial quality natural gas. Refer to S-7884-7 (latest version) for full gaseous fuel specifications.

dimension/weight

L5794GSI EPA	147 (3734)	85 (2159)	97.83 (2485)	21,000 (9,525)
L7044GSI EPA	147 (3734)	85 (2159)	97.83 (2485)	21,000 (9,525)



*I/O Panel shipped loose.
**Engine shipped on shipping skid

mobileFLEX

three-way catalyst (TWC)

Newly designed, cost effective and durable three-way catalytic (TWC) converters are an integral part of our system for EPA Mobile Certification, which eliminates the need for costly on site emissions testing.

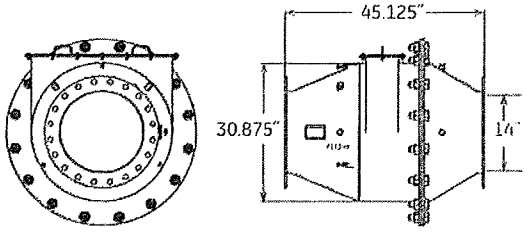
Designed to reduce nitrogen oxides (NOx), carbon monoxide (CO) and hydrocarbons (HC's) by >95% on engines fueled with field gas, LNG, CNG and HD-5 propane. Count on our catalytic converters to deliver easy maintenance, and maximum performance. The TWC has been sized to work in conjunction with our air fuel ratio control to meet the EPA's stringent requirements for Tier 2 mobile certification.

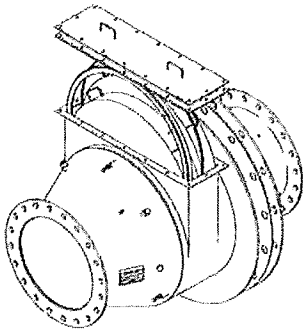
At the heart of the TWC converter is the catalyst element, which is manufactured using sufficient amounts of durable and highly dispersed Platinum Group Metals (PGM). Our metal monoliths supporting the PGM, are brazed, thin-walled stainless steel honeycomb, which are nearly impervious to damage from mechanical or thermal shock and metallurgic erosion.

Meeting the new EPA standards for NOx, CO and hydrocarbon (HC) emissions from mobile and stationary SI (spark ignited) engines is made easier with these new TWC converters. The TWC converters are formulated to achieve high conversion of formaldehyde and CO as well as NOx. The unique design and construction of our catalyst element also reduces backpressure: This means fuel savings and longer catalyst life.

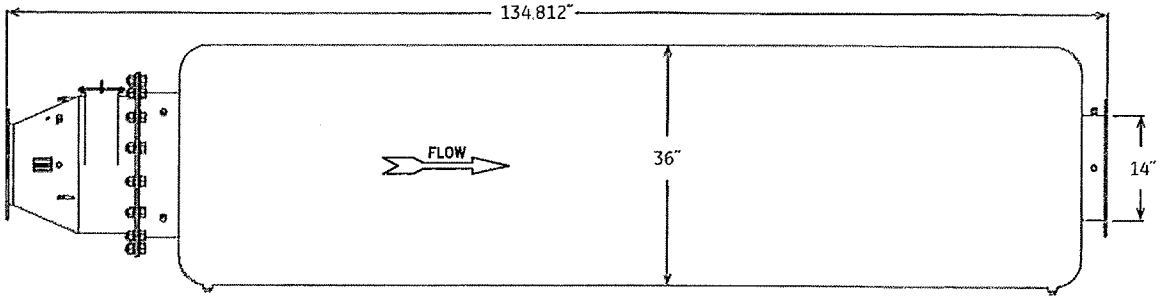
As an option; the TWC converter is a dual element design for the VHP L5794/L7044GSI - EPA engines. Its removable cover allows easy access for maintenance and catalyst element replacement.

GE's Waukesha TWC converter-silencers are recommended for use where equipment must operate continuously in quiet locations— near hospitals, schools, stores, apartments, hotels and residential areas.



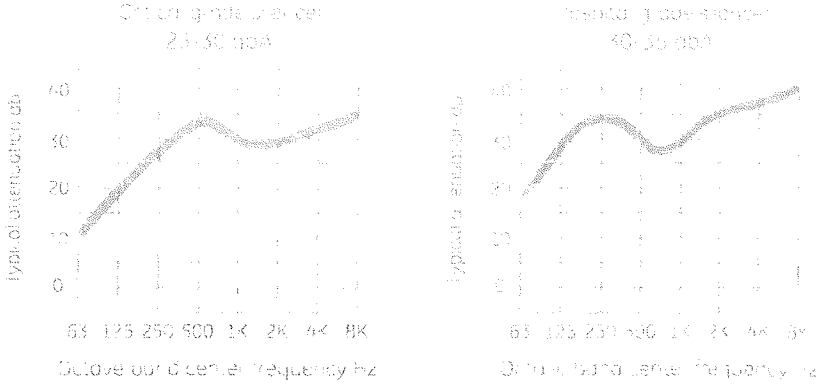


Standard Catalyst - only configuration



Optional integrated catalyst/silencer configuration

silencer sound attenuation



Emissions	EPA Mobile Certification	Mobile 365 days per year, our package simplifies emissions permitting & compliance
Fuel Flexibility	Dual fuel certified (NG & HD-5 propane)	950 - 1650 BTU HHV on field gas, 2606 BTU HHV on HD-5 propane
Transient Response	Operates load steps like a diesel	Up to 65% load steps and 100% load shed, No load banks Rich burn technology enables low cost onsite power
Packageability	Available engine & genset configurations	Includes TWC, skid, and I/O box with display and MIL functionality
Unparalleled Support	Waukesha Pearce Industries Gas Drive Global	• Provide unparalleled support for all North America • Waukesha factory trained technicians service entire engine/genset • Provide range of preventative maintenance programs

	Power bhp (kWb)	1380 (1029)	1680 (1253)
	BSFC @ 100% Load (LHV) Btu/bhp-hr (kJ/kWh)	7665 (10846)	7881 (11149)
	Fuel Consumption @ 100% load Btu/hr x 1000 (kW)	10578 (3100)	13240 (3881)
	Fuel Consumption @ 75% load Btu/hr x 1000 (kW)	8305 (2434)	10323 (3026)
	Fuel Consumption @ 50% load Btu/hr x 1000 (kW)	6200 (1817)	7495 (2197)
	Fuel Consumption @ 25% load Btu/hr x 1000 (kW)	3981 (1167)	4628 (1357)
	Fuel Consumption @ 10% load Btu/hr x 1000 (kW)	2798 (820)	3412 (1000)
Emissions	NOx g/bhp-hr (mg/Nm³ @ 5% O_2)	EPA Mobile Certification - Tier 2	EPA Mobile Certification - Tier 2
Emissions	CO g/bhp-hr (mg/Nm³ @ 5% O_2)	EPA Mobile Certification - Tier 2	EPA Mobile Certification - Tier 2
Emissions	NMHC g/bhp-hr (mg/Nm³ @ 5% O_2)	EPA Mobile Certification - Tier 2	EPA Mobile Certification - Tier 2
Emissions	THC g/bhp-hr (mg/Nm³ @ 5% O_2)	EPA Mobile Certification Tier 2	EPA Mobile Certification Tier 2
Heat Balance	Heat to Jacket Water Btu/hr x 1000 (kW)	3037 (890)	3849 (1128)
Heat Balance	Heat to Lube Oil Btu/hr x 1000 (kW)	470 (138)	567 (166)
Heat Balance	Heat to Intercooler Btu/hr x 1000 (kW)	132 (39)	179 (53)
Heat Balance	Heat to Radiation Btu/hr x 1000 (kW)	674 (198)	724 (212)
Heat Balance	Total Exhaust Heat Btu/hr x 1000 (kW)	2959 (867)	3900 (1143)
Intake/ Exhaust System	Induction Air Flow scfm (Nm³/hr)	2001 (3014)	2424 (3651)
Intake/ Exhaust System	Exhaust Flow lb/hr (kg/hr)	8984 (4075)	11273 (5113)
Intake/ Exhaust System	Exhaust Temperature °F (°C)	1136 (613)	1179 (637)

All data according to full load and subject to technical development and modification

Consult your local GE Power & Water's representative for system application assistance. The manufacturer reserves the right to change or modify without notice, the design or equipment specifications as herein set forth without incurring any obligation either with respect to equipment previously sold or in the process of construction except where otherwise specifically guaranteed by the manufacturer.

GE Power & Water
1101 West Saint Paul Ave
Waukesha, WI 53188-4999
USA
P: +1 262 547 3311
F: +1 262 549 2759

Visit us online at:
www.ge-waukesha.com

0913 GEA-30801

Appendix K

Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-8282-198-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW10 **TOWNSHIP:** 32S **RANGE:** 25E

EQUIPMENT DESCRIPTION:
1380 BHP PUC QUALITY NATURAL GAS, FIELD GAS, OR LPG-FIRED RICH BURN IC ENGINE WAUKESHA MODEL L5794GSI (OR EQUIVALENT) WITH A THREE-WAY CATALYST POWERING AN ELECTRICAL GENERATOR

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. 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
4. 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
5. 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

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

6. 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

7. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 699 lb, 2nd quarter - 700 lb, 3rd quarter - 700 lb, and fourth quarter - 700 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/2016) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

8. 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

9. Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: 1st quarter -511 lb, 2nd quarter -512 lb, 3rd quarter - 512 lb, and fourth quarter - 512 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/2016) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

10. ERC Certificate Number S-4647-4 and S-4906-4 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,499 lb, 2nd quarter - 1,499 lb, 3rd quarter - 1,499 lb, and fourth quarter - 1,500 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/2016) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

12. ERC Certificate Number S-1708-1 (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

13. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of emissions: 1st quarter - 80 lb, 2nd quarter - 80 lb, 3rd quarter - 81 lb, and fourth quarter - 81 lb. These amounts include the applicable offset ratios specified in Rule 2201 Section 4.8 (as amended 2/18/2016) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

14. ERC Certificate Numbers S-826-5, S-4017-5, S-4196-5, and S-1950-5 (or a certificate split from these certificates) 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

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

16. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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

18. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit

19. NOx emission concentrations shall not exceed 5 ppm by volume at 15% O2 or 0.07 g/bhp-hr. [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. VOC emissions concentrations shall not exceed 25 ppmv at 15% O2 or 0.15 g/bhp-hr [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit

21. CO emission concentrations shall not exceed 56 ppm by volume at 15% O2 or 0.6 g/bhp-hr. [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit

22. PM10 emission concentrations shall not exceed 0.06 g/bhp-hr [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit

23. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

24. The engine shall be fired only on natural gas with a sulfur content of less than or equal to 1.0 grains per 100 dry standard cubic feet of fuel gas. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit

25. Emissions from the engine shall neither exceed SOx (as SO2) - 0.00285 lb/1,000 scf of fuel burned, nor PM10 - 0.019 lb/1,000 scf of fuel burned. [District Rule 2201] Federally Enforceable Through Title V Permit

26. All 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 by the portable analyzer 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 4701 and 4702] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) total hours of operation; (2) type and quantity of fuel used; (3) maintenance or modifications performed; (4) the date and time of NOx, CO, and O2 measurements; (5) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2; (6) make and model of exhaust gas analyzer; (7) exhaust gas analyzer calibration records; and (8) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

28. If either the NOX or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 2520, 4701, and 4702] Federally Enforceable Through Title V Permit

29. Source testing of the NOx, CO and VOC emission concentrations shall be conducted within 60 days of initial startup and at least once every 24 months thereafter. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

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

31. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 18, 25A or 25B, or ARB Method 100. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

34. 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

35. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit

36. If the engine is fired on natural gas certified by the supplier to have a sulfur content of 1.0 grains per 100 dscf or less, then the permittee shall maintain on file copies of all natural gas bills and supplier certifications for a period of five years. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit

37. If the engine is not fired on natural gas certified by the supplier to have a sulfur content of 1.0 grains per 100 dscf or less, then the sulfur content of the natural gas being fired in the engine shall be determined using EPA Method 6C, EPA Method 8, or ARB Method 100. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit

38. If the engine is not fired on natural gas certified by the supplier to have a sulfur content of 1.0 grains per 100 dscf or less, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit

39. Permittee shall maintain accurate records of fuel gas BTU content, and daily records of volume and sulfur content of gas burned. [District Rule 2201] Federally Enforceable Through Title V Permit

40. This engine shall be operated and maintained in proper operating condition according to the manufacturer's specifications. [District Rule 4702] Federally Enforceable Through Title V Permit

41. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit

42. The operator shall collect data through the I&M plan in a form approved by the APCO. [District Rule 4702] Federally Enforceable Through Title V Permit

43. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 2520, 4701 and 4702] Federally Enforceable Through Title V Permit

44. The permittee shall maintain an engine operating log to demonstrate compliance. The permittee shall maintain records of: (1) total hours of operation; (2) type and quantity of fuel used; (3) maintenance or modifications performed; (4) the date and time of NOx, CO, and O2 measurements; (5) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2; (6) make and model of exhaust gas analyzer; (7) exhaust gas analyzer calibration records; and (8) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

45. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

46. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit