



JAN 30 2020

Chris Huy
Phillips 66 Pipeline LLC
3900 Kilroy Airport Way, Ste 210
Long Beach, CA 90806

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: C-1301
Project Number: C-1193227

Dear Mr. Huy:

Enclosed for your review and comment is the District's analysis of Phillips 66 Pipeline LLC's application for an Authority to Construct for an IC engine, at 34960 Amador Ave, near Coalinga.

The notice of preliminary decision for this project has been posted on the District's website (www.valleyair.org). After addressing all comments made during the 30-day public notice period, the District intends to issue the Authority to Construct. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Dan Klevann of Permit Services at (661) 392-5500.

Sincerely,

Arnaud Marjollet
Director of Permit Services

AM:dk

Enclosures

cc: Courtney Graham, CARB (w/ enclosure) via email

Samir Sheikh
Executive Director/Air Pollution Control Officer

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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Facility Name: Phillips 66 Pipeline LLC
Mailing Address: 3900 Kilroy Airport Way, Ste. 210
Long Beach, CA 90806
Contact Person: Chris Huy
Telephone: 562-290-1546
E-Mail: Chris.M.Huy@p66.com
Application #(s): C-1301-15-0
Project #: C-1193227
Deemed Complete: November 13, 2019

Date: January 21, 2020
Engineer: Dan Klevan
Lead Engineer: Rich Karrs

I. Proposal

Phillips 66 Pipeline, LLC (Phillips) has requested an Authority to Construct (ATC) permit for the installation of an IC engine to replace IC engine C-1301-3. The engine will be authorized to operate up to 40 hours to commission the engine which will allow it to "bake off" residual oil and to clear all debris from the engine which can foul the catalyst. The draft ATC(s) are included in Appendix A.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (8/15/19)
Rule 2410 Prevention of Significant Deterioration (6/16/11)
Rule 2520 Federally Mandated Operating Permits (8/15/19)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4002 National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4701 Internal Combustion Engines – Phase I (8/21/03)
Rule 4702 Internal Combustion Engines (11/14/13)
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 equipment will be located at 34960 Amador Avenue, within Section 32, Township 19S, Range 16E, near Coalinga, CA. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

The proposed stationary IC engine in this project will power a crude oil pipeline pump.

Commissioning Period

The engine requires an initial "run in" (commissioning) period of 40 hours to clear all debris and preservation-oil in the flow path upstream of the catalyst. This protects the catalyst elements from experiencing any adverse conditions such as over-temperature or contamination during initial set up, which can irreversibly reduce catalyst efficiency and negatively affect catalyst out emission values."

During commissioning applicant proposes to install sufficient sacrificial catalyst elements required to achieve 3.3 g/bhp-hr (this is the emission limit required to satisfy AAQA requirements for Project C-1172573 and may require adjustment following dispersion modeling). Daily monitoring of the engine's exhaust during commissioning will be done using a portable analyzer to detect loss in catalyst activity with fouling. If the proposed emissions limits are exceeded during commissioning the catalyst unit will be replaced and the engine will be restarted. If a second exceedance of the NOx emission limit occurs additional catalyst element will be installed. The time duration of commissioning will be restricted to a maximum of 40 hours

V. Equipment Listing

Pre-Project Equipment Description (see PTO in Appendix B):

C-1301-3-9: 765 BHP DELAVAL MODEL #GSG8 NATURAL GAS-FIRED IC ENGINE (#2) WITH CATALYTIC CONVERTER POWERING A CRUDE OIL PIPELINE PUMP WITH BACKUP LPG FUEL DURING NATURAL GAS CURTAILMENT

Proposed ATC:

C-1301-15-0: 1,150 BHP GE WAUKESHA L5794GSI NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER (OR EQUIVALENT) POWERING A CRUDE OIL PIPELINE PUMP WITH BACKUP LPG FUEL DURING NATURAL GAS CURTAILMENT

VI. Emission Control Technology Evaluation

The engine is equipped with a 3-way, Non-Selective Catalyst Reduction (NSCR) system and an air-to-fuel ratio controller for control of NO_x, CO and VOC. NSCR systems decrease NO_x, CO, and VOC emissions by using a catalyst to promote the chemical reduction of NO_x into N₂ and O₂, and the chemical oxidation of VOC and CO into H₂O and CO₂.

The air-to-fuel ratio controller, (oxygen controller) is used in conjunction with the NSCR to maintain the amount of oxygen in the exhaust stream to optimize catalyst function.

VII. General Calculations

A. Assumptions

- Daily operating schedule: 24 hours/day
- Annual operating schedule: 8,760 hours/year
- EPA F-factor (adjusted to 60°F): 8,578 dscf/MMBtu (40 CFR 60 Appendix B)
- Natural gas heating value: 1,000 Btu/scf (District Policy APR 1720)
- LPG/propane heating value: 94,000 Btu/gal (AP-42, Appendix A, pg. 5, dated 9/85)
- Conversion Btu to bhp-hr: 2,542.5 Btu/bhp-hr (AP 42 Appendix A-14)
- Thermal efficiency of engine: 32%

Assumptions for Commissioning Period

- The applicant has requested that the ATC permit include a commissioning period to allow testing, adjustment, tuning, and calibration of the engine without the catalyst installed. The commissioning period will consist of no more than 40 hours of operation of the engine without the catalyst installed (proposed by applicant).

To streamline emission calculations, PM_{2.5} emissions are assumed to be equal to PM₁₀ emissions. Only if needed to determine if a project is a Federal major modification for PM_{2.5} will specific PM_{2.5} emission calculations be performed.

B. Emission Factors

Engine Emission Factors Normal/Post Commissioning Period			
Pollutant	ppmv (@ 15%O ₂)	g/bhp-hr	Source
NO _x	5	0.07	BACT, proposed
SO _x		0.013 (LPG)	LPG EF per GEAR 11
PM ₁₀		0.03	PTO C-1301-1, '-2 and '-3, proposed
CO	56	0.6	BACT, proposed
VOC	12	0.055*	BACT, proposed

Engine Emission Factors Commissioning Period			
Pollutant	ppmv (@ 15%O2)	g/bhp-hr	Source
NOx		3.3	Required to satisfy AAQA requirements
SOx		0.013	LPG EF per GEAR 11
PM ₁₀		0.03	PTO C-1301-1, '-2 and '-3, proposed
CO		10.10	Waukesha
VOC		0.30	Waukesha

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since this is a new emissions unit, PE1 = 0 for all pollutants.

2. Post-Project Potential to Emit (PE2)

For the engine in this project, the daily and annual PE are summarized in the tables below:

Daily Post-Project Potential to Emit (PE2) – Commissioning Period						
NO _x	3.3	(g/bhp-hr) x 1,150	(bhp) x 24	(hr/day) ÷ 453.6 (g/lb) =	200.8	(lb/day)
SO _x	0.013	(g/bhp-hr) x 1,150	(bhp) x 24	(hr/day) ÷ 453.6 (g/lb) =	0.8	(lb/day)
PM ₁₀	0.03	(g/bhp-hr) x 1,150	(bhp) x 24	(hr/day) ÷ 453.6 (g/lb) =	1.8	(lb/day)
CO	10.10	(g/bhp-hr) x 1,150	(bhp) x 24	(hr/day) ÷ 453.6 (g/lb) =	614.6	(lb/day)
VOC	0.3	(g/bhp-hr) x 1,150	(bhp) x 24	(hr/day) ÷ 453.6 (g/lb) =	18.3	(lb/day)

Daily Post-Project Potential to Emit (PE2) – Normal /Post-Commissioning Period						
NO _x	0.07	(g/bhp-hr) x 1,150	(bhp) x 24	(hr/day) ÷ 453.6 (g/lb) =	4.3	(lb/day)
SO _x	0.013	(g/bhp-hr) x 1,150	(bhp) x 24	(hr/day) ÷ 453.6 (g/lb) =	0.8	(lb/day)
PM ₁₀	0.03	(g/bhp-hr) x 1,150	(bhp) x 24	(hr/day) ÷ 453.6 (g/lb) =	1.8	(lb/day)
CO	0.45	(g/bhp-hr) x 1,150	(bhp) x 24	(hr/day) ÷ 453.6 (g/lb) =	27.4	(lb/day)
VOC	0.055	(g/bhp-hr) x 1,150	(bhp) x 24	(hr/day) ÷ 453.6 (g/lb) =	3.3	(lb/day)

Annual Post-Project Potential to Emit (PE2) - Commissioning Period						
NO _x	3.3	(g/bhp-hr) x	1,150	(bhp) x	40	(hr/yr) ÷ 453.6 (g/lb) = 355 (lb/yr)
SO _x	0.013	(g/bhp-hr) x	1,150	(bhp) x	40	(hr/yr) ÷ 453.6 (g/lb) = 1 (lb/yr)
PM ₁₀	0.03	(g/bhp-hr) x	1,150	(bhp) x	40	(hr/yr) ÷ 453.6 (g/lb) = 3 (lb/yr)
CO	10.10	(g/bhp-hr) x	1,150	(bhp) x	40	(hr/yr) ÷ 453.6 (g/lb) = 1,024 (lb/yr)
VOC	0.3	(g/bhp-hr) x	1,150	(bhp) x	40	(hr/yr) ÷ 453.6 (g/lb) = 30 (lb/yr)

Annual Post-Project Potential to Emit (PE2) – Normal /Post-Commissioning Period						
NO _x	0.07	(g/bhp-hr) x	1,150	(bhp) x	8,720	(hr/yr) ÷ 453.6 (g/lb) = 1,548 (lb/yr)
SO _x	0.013	(g/bhp-hr) x	1,150	(bhp) x	8,720	(hr/yr) ÷ 453.6 (g/lb) = 287 (lb/yr)
PM ₁₀	0.03	(g/bhp-hr) x	1,150	(bhp) x	8,720	(hr/yr) ÷ 453.6 (g/lb) = 663 (lb/yr)
CO	0.6	(g/bhp-hr) x	1,150	(bhp) x	8,720	(hr/yr) ÷ 453.6 (g/lb) = 9,948 (lb/yr)
VOC	0.055	(g/bhp-hr) x	1,150	(bhp) x	8,720	(hr/yr) ÷ 453.6 (g/lb) = 1,216 (lb/yr)

Total Annual Emissions Commissioning Period + Normal Operation (lb/year)			
Pollutant	Commissioning Period	Normal Operation	PE2 Total
NO _x	335	1,548	1,883
SO _x	1	287	288
PM ₁₀	3	663	666
CO	1,024	9,948	10,972
VOC	30	1,216	1,246

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

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

SSPE1 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
C-1301-2-8	4,429	34	444	43,119	1,229
C-1301-3-8	4,429	34	444	43,119	1,229
C-1301-4-7	0	0	0	0	16,258
C-1301-5-6	0	0	0	0	
C-1301-6-6	0	0	0	0	
C-1301-7-6	0	0	0	0	
C-1301-8-6	0	0	0	0	
C-1301-9-7	0	0	0	0	
C-1301-12-0	433	0	23	61	4
C-1301-13-0	0	0	0	0	22
C-1301-14-0	1,555	267	666	9,994	1,221
ERC Certificate C-239-3	0	0	0	337,316	0
SSPE1	10,846	335	1577	433,609	19,963

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

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

SSPE2 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
C-1301-2-8	4,429	34	444	43,119	1,229
C-1301-4-7	0	0	0	0	16,258
C-1301-5-6	0	0	0	0	
C-1301-6-6	0	0	0	0	
C-1301-7-6	0	0	0	0	
C-1301-8-6	0	0	0	0	
C-1301-9-7	0	0	0	0	
C-1301-12-0	433	0	23	61	4
C-1301-13-0	0	0	0	0	22
C-1301-14-0	1,555	267	666	9,994	1,221
C-1301-15-0	1,548	287	663	9,948	1,216
ERC Certificate C-239-3	0	0	0	337,316	0
SSPE2	7,965	588	1796	400,438	19,950

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	10,846	355	1,577	1,577	96,293	19,963
SSPE2	7,965	588	1,796	1,796	63,122	19,950
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No	No

Note: PM2.5 assumed to be equal to PM10

As seen in the table above, the facility is not an existing Major Source and is not becoming a Major Source as a result of this project.

Rule 2410 Major Source Determination:

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

PSD Major Source Determination (tons/year)						
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀
Estimated Facility PE before Project Increase	3.9	9.9	0.3	31.6	0.9	0.9
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source?	No	No	No	No	No	No

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

6. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = PE1 for:

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

otherwise,

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

As shown in Section VII.C.5 above, the facility is not a Major Source for any pollutant.

Therefore BE = PE1.

7. SB 288 Major Modification

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

Since this facility is not a major source for any of the pollutants addressed in this project, this project does not constitute an SB 288 major modification.

8. Federal Major Modification

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

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification.

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 Emissions Increase - New Major Source Determination

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

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

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO₂	VOC	SO₂	CO	PM	PM₁₀
Total PE from New and Modified Units	0.9	0.6	0.1	5.0	0.3	0.3
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	N	N	N	N	N	N

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

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. 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

Pursuant to District Rule 2201, Section 4.1, BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

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

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

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

As seen in Section VII.C.2 above, the applicant is proposing to install a new natural gas-fired IC engine with a PE greater than 2 lb/day for NO_x, CO, and VOC during normal operation. Therefore, BACT for new units with PE > 2 lb/day purposes is triggered for NO_x, CO, and VOC during normal operation.

As seen in Section VII.C.2 above, the applicant is proposing to install a new natural gas fired IC engine with a PE greater than 2 lb/day for NO_x, CO, and VOC **during the commissioning period**. Therefore, BACT for new units with PE > 2 lb/day purposes is triggered for NO_x, CO, and VOC during the commissioning period.

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

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

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

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

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 and/or Federal Major Modification for any pollutant. Therefore BACT is not triggered for any pollutant.

2. BACT Guideline

There is not a current BACT guideline that applies to the IC engine. The previous guideline is being proactively reviewed. Therefore, a project specific BACT analysis is done for this project. (See Appendix C)

There is no existing BACT Guideline for an IC engine commissioning period, which is considered non-routine and highly unusual. Therefore, a project specific BACT Analysis is done for this project commissioning period.

3. Top-Down BACT Analysis

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

Normal Operation:

NO_x: 5 ppmv NO_x @ 15% O₂
CO: 56 ppmv CO @ 15% O₂
VOC: 12 ppmvd @ 15% O₂ or 0.069 g/bhp-hr

Commissioning Period:

NO_x, CO and VOC: Commissioning period not to exceed 40 cumulative hours during the initial startup of the engine. During the commissioning period, the operator shall perform expeditious completion of commissioning activities, and shall use good work practice standards to minimize emissions.

B. Offsets

1. Offset Applicability

Pursuant to District Rule 2201, Section 4.5, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

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

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	7,965	588	1796	400,438	19,950
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	Yes	No

2. Quantity of Offsets Required

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

The quantity of offsets in pounds per year for CO 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) = $(\sum[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,

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

BE = Baseline Emissions, (lb/year)

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

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

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

otherwise,

BE = HAE

The facility is proposing to replace IC engine C-1301-1 with new IC engine C-1301-14-0. Also, there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

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

C-1301-3 BE = 43,119 lb-CO/year
C-1301-15-0 BE = 0 lb-CO/year
C-1301-3 PE2 = 0 lb-CO/year
C-1301-15-0 PE2 = 9,948 lb-CO/year
ICCE = 0 lb/year

Therefore,

Offsets Required (lb/year) = $([(0 + 9,948) - (43,119 + 0)] + 0) \times DOR$
= $(-33,171 \text{ lb-CO/year}) \times DOR$
= 0 lb-CO/year

As demonstrated in the calculation above, the amount of offsets is zero. Therefore, offsets will not be required for this project.

C. Public Notification

1. Applicability

Pursuant to District Rule 2201, Section 5.4, public noticing is required for:

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

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

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

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

b. **PE > 100 lb/day**

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO _x	200.8	100 lb/day	Yes
SO _x	0.8	100 lb/day	No
PM ₁₀	1.8	100 lb/day	No
CO	614.6	100 lb/day	Yes
VOC	18.3	100 lb/day	No

Therefore, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

Public notification is required if the pre-project Stationary Source Potential to Emit (SSPE1) is increased to a level exceeding the offset threshold levels. The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	10,846	7,965	20,000 lb/year	No
SO _x	335	588	54,750 lb/year	No
PM ₁₀	1,577	1,796	29,200 lb/year	No
CO	433,609	400,438	200,000 lb/year	No
VOC	19,963	19,950	20,000 lb/year	No

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

d. SSIPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	7,965	10,846	-2,881	20,000 lb/year	No
SO _x	588	335	253	20,000 lb/year	No
PM ₁₀	1,796	1,577	219	20,000 lb/year	No
CO	400,438	433,609	-33,171	20,000 lb/year	No
VOC	19,950	19,963	-13	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

Since this facility does not have a Title V operating permit, this change is not a Title V significant Modification, and therefore public noticing is not required.

2. Public Notice Action

As discussed above, public noticing is required for this project for NO_x emissions in excess of 100 lb/day. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be electronically published on the District's website prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

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

Proposed Rule 2201 (DEL) Conditions:

- Except during the commissioning period emissions from this IC engine shall not exceed any of the following limits: 5 ppmvd NO_x @ 15% O₂ or 0.07 g-NO_x/bhp-hr, 0.012 g-SO_x/bhp-hr, 0.03 g-PM₁₀/bhp-hr, 56 ppmvd CO @ 15% O₂ or 0.45 g-CO/bhp-hr, or 12 ppmvd VOC @ 15% O₂ or 0.55 g-VOC/bhp-hr. [District Rules 2201, 4701, and 4702] N
- During the commissioning period not to exceed 40 cumulative hours emissions from this IC engine shall not exceed 3.3 g-NO_x/bhp-hr, 0.013 g-SO_x/bhp-hr, 0.03 g-PM₁₀/bhp-hr or 10.10 g-CO/bhp-hr, 0.30 g-VOC/bhp-hr. [District Rule 2201] N

E. Compliance Assurance

1. Source Testing

Source testing to measure natural gas-combustion NO_x, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up and at least once every 24 months. [District Rules 2201 and 4702]

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

District Rule 4702 requires periodic monitoring of NO_x and CO as shown below in the Rule 4702 compliance discussion.

3. Recordkeeping

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

The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, the total duration of the commissioning period; on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 2201, 4701 and 4702] N

{2995} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702] N

The permittee shall maintain on file copies of natural gas and LPG bills. [District Rule 2201] N

The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, the total duration of the commissioning period; on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201, 4701 and 4702] N

During both commissioning and non-commissioning operation, the permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Y

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 4701 and 4702] N

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

Section 4.14 of District Rule 2201 requires that an AAQA be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to **Appendix D** of this document for the AAQA summary sheet.

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

The proposed location is in a non-attainment area for the state's PM₁₀ as well as federal and state PM_{2.5} thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM₁₀ and PM_{2.5}.

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

Since this facility's potential emissions do not exceed any major source thresholds of Rule 2201, this facility is not a major source, and Rule 2520 does not apply.

Rule 4001 New Source Performance Standards (NSPS)

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

The purpose of 40 CFR 60 Subpart JJJJ is to establish New Source Performance Standards to reduce emissions of NO_x, SO_x, PM, CO, and VOC from new stationary spark ignition (SI) internal combustion (IC) engines.

Pursuant to Section 60.4230, compliance with this subpart is required for owners and operators of stationary SI IC engines that commence construction after June 12, 2006, where the stationary SI ICE are manufactured: (a) on or after July 1, 2007, for engines with a maximum engine power 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); (b) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP; (c) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or (d) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

The proposed engine is a 1,150 bhp SI ICE that will be constructed after June 12, 2006 and manufactured after July 1, 2007; therefore, the engine is subject to this subpart. However, the District has not been delegated the authority to implement 40 CFR 60, Subpart JJJJ for non-Major Sources; therefore, the requirements from this subpart will not be included in the permit. However, the applicant will be responsible for compliance with the applicable requirements of this regulation.

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

40 CFR 63 Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Stationary Internal Combustion Engines

40 CFR 63 Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAPs) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. A major source of HAP emissions is a facility that has the potential to emit any single HAP at a rate of 10 tons/year or greater or any combinations of HAPs at a rate of 25 tons/year or greater. An area source of HAPs is a facility is not a major source of HAPs.

Pursuant to Section 63.6590(c), an affected source that is a new or reconstructed stationary Reciprocating Internal Combustion Engine (RICE) located at an area source must meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII, for compression ignition engines or 40 CFR 60, Subpart JJJJ, for spark ignition engines and no further requirements apply for such engines under this part.

As with 40 CFR 60, Subpart JJJJ, the District has not been delegated the authority to implement 40 CFR 63, Subpart ZZZ for non-Major Sources; therefore, no requirements from this subpart

will be included in the permit. However, the applicant will be responsible for compliance with the applicable requirements of this regulation.

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).

Since the engine is fired solely on gaseous fuel, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity.

The following condition will be listed on the permit to ensure compliance:

- {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]

Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (**Appendix D**), the total facility prioritization score including this project was less than or equal to one. Therefore, no further analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

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 D of this report, the emissions increases for this project was determined to be less than significant.

Rule 4201 Particulate Matter Concentration

This Rule requires the particulate matter emissions from each engine to be less than or equal to the rule limit of 0.1 grain per dry standard cubic foot. The following calculation demonstrates compliance with this limit.

$$\frac{0.03 \text{ g} \cdot \text{PM}}{\text{hp} \cdot \text{hr}} \times \frac{1 \text{ hp} \cdot \text{hr}}{2,543 \text{ Btu}} \times \frac{10^6 \text{ Btu}}{8,578 \text{ ft}^3} \times \frac{0.25 \text{ Btu}_{\text{out}}}{1 \text{ Btu}_{\text{in}}} \times \frac{15.43 \text{ grain}}{\text{gram}} = 0.005 \frac{\text{grain} \cdot \text{PM}}{\text{ft}^3}$$

The following condition is listed on each engine permit to ensure compliance.

- {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 NOx, CO, and VOC emissions from internal combustion engines rates 25 bhp or greater.

The spark-ignited internal combustion engine is rich-burn and greater than 25 bhp. Therefore, the 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. In lieu of complying with Table 1 emission limits, the operator of a spark-ignited engine shall comply with the applicable emissions limits pursuant to Section 8.0.

Since the section 7.5 deadlines have passed, the engine will comply with the emission limits specified in Table 2 (discussed below).

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 NO_x, CO, and VOC emission limits pursuant to Table 2;
- 5.2.2.1.2 SO_x 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.

Table 2: Rule 4702 Emission Limits			
Engine Type	NO_x Emission Limit (ppmv @ 15% O₂, dry)	CO Emission Limit (ppmv @ 15% O₂, dry)	VOC Emission Limit (ppmv @ 15% O₂, dry)
Rich-Burn Engine, not listed above	11	2000	250

The proposed emissions are 5 ppmv @3% NO_x, 56 ppmv @ 3% CO, and 12 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 NO_x emission limits specified in Section 5.2. The ATC's emissions limits are in units of ppmv @ 15% O₂ and therefore percent emission reduction is not being used. These sections of the rule are not applicable.

Section 5.6 applies to operators who elect to pay an annual fee in lieu of complying with the NO_x emission limit requirements of Section 5.2.2.1.1. The engine will comply with the NO_x 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 PUC-quality natural gas, commercial propane or liquefied petroleum gas, or a combination of such gases and therefore meets the requirement of Section 5.7.2, 5 gr S/100 scf.

Section 5.8 requires that the operator of a non-agricultural spark-ignited IC engine subject to the requirements of Section 5.2 or any engine subject to the requirements of Section 8.0 shall comply with the following requirements of Sections 5.8.1 – 5.8.11:

Section 5.8.1 stipulates that for each engine with a rated brake horsepower of 1,000 hp or greater and which is allowed to operate more than 2,000 hours per calendar year, or with an external emission control device, shall either install, operate, and maintain continuous monitoring equipment for NO_x, CO, and oxygen, as identified in Rule 1080 (Stack Monitoring), or install, operate, and maintain APCO-approved alternate monitoring. The monitoring system may be a continuous emissions monitoring system (CEMS), a parametric emissions monitoring system (PEMS), or an alternative monitoring system approved by the APCO. APCO-approved alternate monitoring shall consist of one or more of the following:

- 5.8.1.1 Periodic NO_x and CO emission concentrations,
- 5.8.1.2 Engine exhaust oxygen concentration,
- 5.8.1.3 Air-to-fuel ratio,
- 5.8.1.4 Flow rate of reducing agents added to engine exhaust,
- 5.8.1.5 Catalyst inlet and exhaust temperature,
- 5.8.1.6 Catalyst inlet and exhaust oxygen concentration, or
- 5.8.1.7 Other operational characteristics.

The applicant has proposed to comply with this section of the Rule by proposing a pre-approved alternate emissions monitoring plan that specifies that the permittee perform periodic monitoring of NO_x, CO, and O₂ emissions concentrations as specified in District Policy SSP-1810, dated 4/29/04. Therefore, the following condition will be placed on the permit to ensure compliance:

During non-commissioning operation the permittee shall monitor and record the stack concentration of NOX, 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 be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. 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 if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4701 and 4702] N

During non-commissioning operation, 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 performing the notification and testing required by this condition. [District Rules 4701 and 4702] N

During non-commissioning operation, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702] N

During both commissioning and non-commissioning operation, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702] Y

Section 5.8.3 requires each engine using an alternative monitoring system to submit to and receive approval from the APCO adequate verification of the alternative monitoring system's acceptability. The applicant has satisfied the requirements of Section 5.8.3 by using a District pre-approved alternate monitoring procedure as indicated in Section 5.8.1 above.

Section 5.8.6 requires the operator to install and operate a nonresettable elapsed operating time meter. In lieu of installing a nonresettable time meter, the owner or operator may use an

alternative device, method, or technique in determining operating time provided that the alternative is approved by the APCO and is allowed by Permit-to-Operate or Stationary Equipment Registration condition. The owner of the engine shall properly maintain and operate the time meter or alternative device in accordance with the manufacturer's instructions.

The following condition will be listed on the permits to ensure compliance with Section 5.8.6:

This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702]

Section 5.8.7 requires the owner, for each engine, to implement the Inspection and Monitoring (I&M) plan submitted to and approved by the APCO pursuant to Section 6.5. The applicant has submitted an I&M program and the implementation of this plan will be explained in detail in the section that covers Section 6.5 of this Rule.

Section 5.8.8 requires the owner, for each engine, to collect data through the I&M plan in a form approved by the APCO. The applicant has submitted an I&M program and the implementation of this plan will be explained in detail in the section that covers Section 6.5 of this Rule.

Section 5.8.9 requires the owner, for each engine, to use a portable NOx analyzer to take NOx emission readings to verify compliance with the emission requirements of Section 5.2 or section 8.0 during each calendar quarter in which a source test is not performed. All emission readings shall be taken with the engine 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. All NOx emissions readings shall be reported to the APCO in a manner approved by the APCO. NOx emission readings taken pursuant to this section shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive minute sample reading or by taking at least five (5) readings evenly spaced out over the 15 consecutive-minute period. Therefore, a permit condition will be included on the ATCs to ensure compliance:

All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702]

Section 6.1 requires the operator of an engine subject to the requirements of Section 5.2 to submit an approvable emission control plan of all actions to be taken to satisfy the emission requirements of Section 5.2 and the compliance schedules of Section 7.0.

Pursuant to Section 6.1.1, the requirement to submit an emission control plan shall apply to engines that have been retrofitted with an exhaust control device, except those engines

certified per Section 9.0 the engine in this project has been retrofitted with an exhaust control device and is not certified per Section 9.0; therefore, the applicant will be required to submit an emissions control plan.

Per Section 6.1.2, such emission control plan shall contain a list with the following for each permitted engine:

6.1.2.1 Permit-to-Operate number, Authority-to-Construct number, or Permit-Exempt Equipment Registration number,

6.1.2.2 Engine manufacturer,

6.1.2.3 Model designation and engine serial number,

6.1.2.4 Rated brake horsepower,

6.1.2.5 Type of fuel and type of ignition,

6.1.2.6 Combustion type: rich-burn or lean-burn,

6.1.2.7 Total hours of operation in the previous one-year period, including typical daily operating schedule,

6.1.2.8 Fuel consumption (cubic feet for gas or gallons for liquid) for the previous one-year period,

6.1.2.9 Stack modifications to facilitate continuous in-stack monitoring and to facilitate source testing,

6.1.2.10 Type of control to be applied, including in-stack monitoring specifications,

6.1.2.11 Applicable emission limits,

6.1.2.12 Documentation showing existing emissions of NO_x, VOC, and CO, and

6.1.2.13 Date that the engine will be in full compliance with this rule.

Section 6.1.3 requires that the emission control plan shall identify the type of emission control device or technique to be applied to each engine and a construction/removal schedule, or shall provide support documentation sufficient to demonstrate that the engine is in compliance with the emission requirements of this rule.

The applicant has submitted all the required information for Section 6.1 in the application for the IC engine involved with this project.

Section 6.2 requires that except for engines subject to Section 4.0, the owner of an engine subject to the requirements of this rule shall maintain an engine operating log to demonstrate compliance with this rule. This information shall be retained for a period of at least five years,

shall be readily available, and be made available to the APCO upon request. The engine operating log shall include, on a monthly basis, the following information:

6.2.3.1 Total hours of operation,

6.2.3.2 The type of fuel used,

6.2.3.3 The purpose for operating the engine,

6.2.3.4 For emergency standby engines, all hours of non-emergency and emergency operation shall be reported, and

6.2.3.5 Other support documentation necessary to demonstrate claim to the exemption.

Therefore, the following condition will be included on the ATCs to ensure compliance:

The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, the total duration of the commissioning period; on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201, 4701 and 4702] N

Section 6.2.2 requires all data collected pursuant to the requirements of Section 5.9 to be maintained for at least five years, be readily available, and made available to the APCO upon request. Therefore, the following condition will be included on the ATC to ensure compliance:

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 4701 and 4702]

Section 6.3 outlines the compliance testing requirements for the operator of an engine subject to the requirements of Section 5.2 or the requirements of Section 8.0 and requires the operator of an engine identified in Section 6.3.1 .1 through Section 6.3.1 .4 to comply with the requirements of Section 6.3.2 through Section 6.3.4.

6.3.1.1 Engines that have been retrofitted with an exhaust control device, except those certified per Section 9.0;

6.3.1.2 Engines subject to Section 8.0;

6.3.1.3 An AO spark-ignited engine that is subject to the requirements of Section 8.0;

6.3.1.4 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 engine in this project is a non-AO spark-ignited engine that is equipped with an exhaust control system and is not subject to the requirements of Section 8.0. The exhaust control system is manufacturer-equipped and has not been retrofitted. Therefore, the requirements of sections 6.5.2 through 6.5.9 are not applicable to the engine in this project.

Section 7.1 requires that the owner of an engine which becomes subject to the emission limits of this rule through loss of exemption shall not operate the subject engine, except as required for obtaining a new or modified Permit-to-Operate for the engine, until the owner demonstrates full compliance with the requirements of this rule.

The engine proposed in this project is already subject to this rule; therefore this section is not applicable.

Section 7.5 requires that the owner of an engine subject to the requirements of this rule shall not operate the engine unless the owner demonstrates and maintains the engine in compliance with the applicable requirements of this rule by the dates indicated in Table 5- Compliance Schedule for Non-AO Spark-Ignited Engines Subject to Table 2 Emission Limits, and SOx Control and Monitoring Requirements.

This project results in the installation of a new engine. The proposed engine meets all the requirements of Rule 4702; therefore, the engine will be in compliance as of the date of initial operation and no further discussion is required.

Section 8.0 outlines the requirements for an Alternative Emission Control Plan (AECPP). As previously discussed, the engine in this project is not subject to submitting an AECPP; therefore, the requirements of this section are not applicable to the engine in this project.

As stated previously, this project results in the installation of a new engine at this facility. The engine will be in compliance as of the date of initial operation. Therefore, this Section of the Rule is not applicable to the engine proposed with this project.

Compliance with this rule 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

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

On December 17, 2009, the District's Governing Board adopted a policy, APR 2005, *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*, for addressing GHG emission impacts when the District is Lead Agency under CEQA and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change. Consistent with District Policy 2005, projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emission.

The California Air Resources Board (ARB) adopted a Cap-and-Trade regulation as part one of the strategies identified for AB 32. This Cap-and-Trade regulation is a statewide plan, supported by a CEQA compliant environmental review document, aimed at reducing or mitigating GHG emissions from targeted industries. Facilities subject to the Cap-and-Trade regulation are subject to an industry-wide cap on overall GHG emissions. Any growth in emissions must be accounted for under that cap such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions.

Under District policy APR 2025, *CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation*, the District finds that the Cap-and-

Trade is a regulation plan approved by ARB, consistent with AB32 emission reduction targets, and supported by a CEQA compliant environmental review document. As such, consistent with District Policy 2005, projects complying with Cap-and-Trade requirements are determined to have a less than significant individual and cumulative impact for GHG emissions.

The GHG emissions increases associated with this project result from the combustion of fossil fuel(s), other than jet fuel, delivered from suppliers subject to the Cap-and-Trade regulation. Therefore, as discussed above, consistent with District Policies APR 2005 and APR 2025, the District concludes that the GHG emissions increases associated with this project would have a less than significant individual and cumulative impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing or former use. Furthermore, the District determined that the activity will not have a significant effect on the environment. Therefore, the District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the common sense exemption that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

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 criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. 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 C-1301-15-0 subject to the permit conditions on the attached draft ATC in **Appendix A**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-1301-15-0	3020-10-F	1,150 bhp	\$900

Appendixes

- A: Draft ATC
- B: Current PTO(s)
- C: BACT Analysis
- D: HRA Summary
- E: Quarterly Net Emissions Change

APPENDIX A
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-1301-15-0

LEGAL OWNER OR OPERATOR: PHILLIPS 66 PIPELINE LLC
MAILING ADDRESS: PO BOX 1133
COALINGA, CA 93210

LOCATION: COALINGA PUMP STATION
34960 AMADOR AVE
COALINGA, CA 93210

EQUIPMENT DESCRIPTION:

1,150 BHP GE WAUKESHA L5794GSI NATURAL GAS-FIRED (BACKUP LPG) IC ENGINE WITH CATALYTIC CONVERTER (OR EQUIVALENT) POWERING A CRUDE OIL PIPELINE PUMP

CONDITIONS

1. PTO C-1301-3 shall be canceled upon implementation of this ATC. [District Rule 2201]
2. 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]
3. 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 2010]
4. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]
5. 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]
6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

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Arnaud Marjollet, Director of Permit Services
C-1301-15-0, Jan 24 2020 1:25PM - KLEVAIND : Joint Inspection NOT Required

8. {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]
9. This unit shall be fired on Public Utility Commission (PUC) regulated natural gas as the primary fuel. During periods of natural gas curtailment this unit can be fired on Liquefied Petroleum Gas (LPG). [District Rules 2201, 4702 and 4801]
10. During the commissioning period, the operator shall perform expeditious completion of commissioning activities, and shall use good work practice standards to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Commissioning period shall be performed between the times of 6 am and 8 pm. [District Rule 4102]
12. Except during the commissioning period emissions from this IC engine shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 or 0.07 g-NOx/bhp-hr, 0.012 g-SOx/bhp-hr, 0.03 g-PM10/bhp-hr, 56 ppmvd CO @ 15% O2 or 0.45 g-CO/bhp-hr, or 12 ppmvd VOC @ 15% O2 or 0.55 g-VOC/bhp-hr. [District Rules 2201, 4701, and 4702]
13. During the commissioning period not to exceed 40 cumulative hours emissions from this IC engine shall not exceed 3.3 g-NOx/bhp-hr, 0.013 g-SOx/bhp-hr, 0.03 g-PM10/bhp-hr or 10.10 g-CO/bhp-hr, 0.30 g-VOC/bhp-hr. [District Rule 2201]
14. During the commissioning period permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once daily using a portable emission monitor that meets District specifications. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration for commissioning, NSCR catalyst unit(s) shall be added and/or replaced as necessary to bring the unit back into compliance. [District Rule 2201]
15. Source testing to measure natural gas-combustion NOx, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up and at least once every 24 months. [District Rules 2201 and 4702]
16. 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 Rules 4701 and 4702]
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 4701 and 4702]
18. {3210} 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, 4701, and 4702]
19. {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]
20. The results of each source test shall be submitted to the District within 60 days after the test. [District Rule 1081]
21. This engine shall be operated within the ranges that the source testing has shown result in pollution concentrations within the emissions limits as specified on this permit. [District Rules 4701 and 4702]
22. During non-commissioning operation the permittee shall monitor and record the stack concentration of NOx, 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 be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. 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 if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4701 and 4702]

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CONDITIONS CONTINUE ON NEXT PAGE

23. During non-commissioning operation, if either the NO_x 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 performing the notification and testing required by this condition. [District Rules 4701 and 4702]
24. During non-commissioning operation, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702]
25. During both commissioning and non-commissioning operation, the permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
26. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
27. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Maintenance (I&M) plan submitted to the District. [District Rule 4702]
28. 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 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'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]
29. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, the total duration of the commissioning period; on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 2201, 4701 and 4702]
30. {2995} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702]
31. The permittee shall maintain on file copies of natural gas and LPG bills. [District Rule 2201]
32. 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 4701 and 4702]

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APPENDIX B
Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-1301-3-9

EXPIRATION DATE: 12/31/2022

SECTION: 32 **TOWNSHIP:** 19S **RANGE:** 16E

EQUIPMENT DESCRIPTION:

765 BHP ENTERPRISE NATURAL GAS-FIRED IC ENGINE (#2) WITH CATALYTIC CONVERTER POWERING A CRUDE OIL PIPELINE PUMP WITH BACKUP LPG FUEL DURING NATURAL GAS CURTAILMENT

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. This unit shall be fired on Public Utility Commission (PUC) regulated natural gas as the primary fuel. During periods of natural gas curtailment this unit may be fired on Liquefied Petroleum Gas (LPG). [District Rules 2201 and 4801]
5. Emissions from this IC engine shall not exceed any of the following limits: 11 ppmvd NO_x @ 15% O₂ or 0.155 g-NO_x/bhp-hr, 0.0023 g-SO_x/bhp-hr when fired on natural gas, 0.05 g-SO_x/bhp-hr when fired on LPG, 0.03 g-PM10/bhp-hr, 400 ppmvd CO @ 15% O₂ or 2.911 g-CO/bhp-hr, or 20 ppmvd VOC @ 15% O₂ or 0.083 g-VOC/bhp-hr. [District Rules 2201, 4701, and 4702]
6. Source testing to measure natural gas-combustion NO_x, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702]
7. 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 Rules 4701 and 4702]
8. 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, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 4701 and 4702]
9. The following test methods shall be used: NO_x (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, 4701, and 4702]
10. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
12. This engine shall be operated within the ranges that the source testing has shown result in pollution concentrations within the emissions limits as specified on this permit. [District Rules 4701 and 4702]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: PHILLIPS 66 PIPELINE LLC

Location: COALINGA PUMP STATION, 34950 AMADOR AVE, COALINGA, CA 93210

C-1301-3-9: Jan 23 2020 8:29AM - KLEVANN0

13. The permittee shall monitor and record the stack concentration of NO_x, 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 be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. 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 if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Monitoring for NO_x, CO, and O₂ shall also be required within one week of any catalyst replacement. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4701 and 4702]
14. If either the NO_x 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 performing the notification and testing required by this condition. [District Rules 4701 and 4702]
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702]
16. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
17. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]
18. 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 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'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]
19. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702]
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702]
21. The permittee shall maintain on file copies of natural gas and LPG bills. [District Rule 2201]
22. 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 4701 and 4702]

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

APPENDIX C
BACT Analysis

Steady State Operation

BACT Analysis for NOx Emissions:

Step 1 – Identify All Control Technologies

5 ppmv NOx @ 15% O₂ (Achieved-in-Practice)

2 ppmvd @ 15% O₂ Natural Gas-Fired Turbine (Alternate Basic Equipment)

Electric Motor (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 greater than the achieved in practice option of 0.07 g/bhp-hr. Therefore, no NOx emission reductions are expected if the output from the unit is less than 3 MW. The proposed engine will have an electrical output of approximately 0.9 MW. Therefore, the gas turbine option is not expected to result in lower emissions and will be eliminated from consideration for this project.

The main pipeline pumps at this facility are driven by existing gas engines. In order to run the new main line pump with an electric motor high voltage power would be required which is not available at this station. Therefore, electric motors are not technologically feasible.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

5 ppmv NOx @ 15% O₂

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% O₂

BACT Analysis for CO Emissions:

Step 1 – Identify All Control Technologies

56 ppmv CO @ 15% O₂ (Achieved-in-Practice)

Electric Motor (Alternate Basic Equipment)

Step 2 – Eliminate Technologically Infeasible Options

The main pipeline pumps at this facility are driven by existing gas engines. In order to run the new main line pump with an electric motor high voltage power would be required which is not available at this station. Therefore, electric motors are not technologically feasible.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

56 ppmv CO @ 15% O₂

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 CO @ 15% O₂

BACT Analysis for VOC Emissions:

Step 1 – Identify All Control Technologies

25 ppmvd @ 15% O₂ or 0.15 g/bhp-hr (Achieved-in-Practice)

12 ppmvd @ 15% O₂ or 0.069 g/bhp-hr (Technologically Feasible)

Electric Motor (Alternate Basic Equipment)

Step 2 – Eliminate Technologically Infeasible Options

The main pipeline pumps at this facility are driven by existing gas engines. In order to run the new main line pump with an electric motor high voltage power would be required which is not available at this station. Therefore, electric motors are not technologically feasible.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

25 ppmvd @ 15% O₂ or 0.15 g/bhp-hr (Achieved-in-Practice)

12 ppmvd @ 15% O₂ or 0.069 g/bhp-hr (Technologically Feasible)

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 12 ppmvd @ 15% O₂ or 0.069 g/bhp-hr

Commissioning Period

During commissioning, the engine is operated to remove "bake off" residual oil which can damage the three-way catalyst.

NOx, CO and VOC

Step 1 – Identify All Control Technologies

1. Three-way catalysts.
2. Operator shall perform expeditious completion of commissioning activities not to exceed 40 cumulative hours during the initial startup of the engine, and shall use good work practice standards to minimize emissions.

Step 2 – Eliminate Technologically Infeasible Options

Three-way catalysts control NOx, CO and VOC emissions. A three-way catalyst cannot be used during the commissioning period; therefore, this option is eliminated.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

Operator shall perform expeditious completion of commissioning activities not to exceed 40 cumulative hours during the initial startup of the engine, and shall use good work practice standards to minimize emissions.

Step 4 – Cost Effectiveness Analysis

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

Step 5 – Select BACT

Operator shall perform expeditious completion of commissioning activities not to exceed 40 cumulative hours during the initial startup of the engine, and shall use good work practice standards to minimize emissions.

APPENDIX D
HRA Summary

San Joaquin Valley Air Pollution Control District

Risk Management Review and Ambient Air Quality Analysis

To: Dan Klevann – Permit Services
 From: Keanu J Morin – Technical Services
 Date: December 31, 2019
 Facility Name: Phillips 66 Pipeline LLC
 Location: Latitude: 36.228412, Longitude: -120.260702
 Application #(s): C-1301-15-0
 Project #: C-1193227

1. Summary

1.1 RMR

Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required	Special Permit Requirements
15	0.14	N/A ¹	N/A ¹	N/A ¹	No	Yes
Project Totals	0.14	N/A ¹	N/A ¹	N/A ¹		
Facility Totals	0.29	0.00	0.00	0.00E+00		

Notes:

- The project passed with a prioritization score less than 1.

1.2 AAQA

Pollutant	Air Quality Standard (State/Federal)				
	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass		Pass		
NO _x	Pass				Pass
SO _x	Pass	Pass		Pass	Pass
PM10				Pass	Pass
PM2.5				Pass	Pass

Notes:

- Results were taken from the attached AAQA Report.
- The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2) unless otherwise noted below.
- Pursuant to District Policy APR-1925, a Tier 3 analysis using the Ozone Limiting Method (OLM) method was performed to demonstrate compliance with the 1-hour NO₂ standard.
- Modeled PM10 concentrations were below the District SIL for non-fugitive sources of 5 µg/m³ for the 24-hour average concentration and 1 µg/m³ for the annual concentration.
- Modeled PM2.5 concentrations were below the District SIL for non-fugitive sources of 1.2 µg/m³ for the 24-hour average concentration and 0.2 µg/m³ for the annual concentration.

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

Unit # 15-0

1. Commissioning period shall be performed between the times of 6am and 8pm.

2. Project Description

Technical Services received a request on December 26, 2019 to perform a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for the following:

- Unit -15-0: 1,150 BHP GE Waukesha L5794GSI Natural Gas-Fired (backup LPG) IC engine with Catalytic Converter (or equivalent) powering a crude oil pipeline pump

3. RMR Report

3.1 Analysis

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

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

Then, generally no further analysis is required.

The District's significant prioritization score threshold is defined as being equal to or greater than 1.0. If a preliminary analysis demonstrates that either the unit(s) or the project's or the facility's total prioritization score is greater than the District threshold, a screening or a refined assessment is required

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

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

- Toxic emissions for this proposed Portable or Stationary Gasoline-Fired Non-Catalyst or Catalyst Internal Combustion Engine were calculated using default emission factors for Gasoline Combustion from the January 2010 South Coast Air Quality Management District report, Supplemental Instructions Reporting Procedures for AB2588 Facilities for Reporting their Quadrennial Air Toxics Emissions Inventory Annual Emissions Reporting Program.

These emissions were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy, risks from the proposed unit's toxic emissions were prioritized using the procedure in the 2016 CAPCOA Facility Prioritization Guidelines. The prioritization score for this proposed unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

Source Process Rates						
Unit ID	Process ID	Process Material	Process Units	Hourly Process Rate	Annual Process Rate	Receptor Distance (m)
15-0	1	Natural Gas (8720hrs)	MMscf.	0.008	72.85	<1500
15-0	2	Natural Gas (40hrs Commissioning)	MMscf.	0.008	0.33	<1500

4. AAQA Report

The District modeled the impact of the proposed project on the National Ambient Air Quality Standard (NAAQS) and/or California Ambient Air Quality Standard (CAAQS) in accordance with District Policy APR-1925 (Policy for District Rule 2201 AAQA Modeling) and EPA's Guideline for Air Quality Modeling (Appendix W of 40 CFR Part 51). The District uses a progressive three level approach to perform AAQAs. The first level (Level 1) uses a very conservative approach. If this analysis indicates a likely exceedance of an AAQS or Significant Impact Level (SIL), the analysis proceeds to the second level (Level 2) which implements a more refined approach. For the 1-hour NO₂ standard, there is also a third level that can be implemented if the Level 2 analysis indicates a likely exceedance of an AAQS or SIL.

The modeling analyses predicts the maximum air quality impacts using the appropriate emissions for each standard's averaging period. Required model inputs for a refined AAQA include background ambient air quality data, land characteristics, meteorological inputs, a receptor grid, and source parameters including emissions. These inputs are described in the sections that follow.

Ambient air concentrations of criteria pollutants are recorded at monitoring stations throughout the San Joaquin Valley. Monitoring stations may not measure all necessary pollutants, so background data may need to be collected from multiple sources. The following stations were used for this evaluation:

Monitoring Stations				
Pollutant	Station Name	County	City	Measurement Year(s)
CO	Tranquillity	Fresno	Tranquillity	2016
NOx	Hanford	Kings	Hanford	2016
PM10	Visalia - N. Church	Tulare	Visalia	2016
PM2.5	Tranquillity	Fresno	Tranquillity	2016
SOx	Fresno - Garland	Fresno	Fresno	2016
Ozone (for OLM)	Hanford-S Irwin Street	Kings	Hanford	2012-2016

Technical Services performed modeling for directly emitted criteria pollutants with the emission rates below:

Emission Rates (lbs/hour)						
Unit ID	Process	NOx	SOx	CO	PM10	PM2.5
15-0	1 (8720 hrs.)	0.18	0.03	1.14	0.08	0.08
15-0	2 (40 hrs. Commissioning)	8.37	0.03	25.61	0.08	0.08

Emission Rates (lbs/year)						
Unit ID	Process	NOx	SOx	CO	PM10	PM2.5
15-0	1 (8720 hrs.)	1547.5	265.3	9948.4	663.2	663.2
15-0	2 (40 hrs. Commissioning)	334.7	1.32	1024.3	3.04	3.04

The AERMOD model was used to determine if emissions from the project would cause or contribute to an exceedance of any state of federal air quality standard. The parameters outlined below and meteorological data for Turk from 2004-2008 (rural dispersion coefficient selected) were used for the analysis:

The following parameters were used for the review:

Point Source Parameters						
Unit ID	Unit Description	Release Height (m)	Temp. (°K)	Exit Velocity (m/sec)	Stack Diameter (m)	Vertical/Horizontal/Capped
15-0	1150 BHP NG Engine	9.14	450	13.58	0.31	Capped

5. Conclusion

5.1 RMR

The cumulative prioritization score for the facility, including this project, is less than 1.0. **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.

5.2 AAQA

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

6. Attachments

- A. Modeling 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 results

APPENDIX E
Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

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

$QNEC = PE2 - PE1$, where:

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

Using the values in Sections VII.C.2 and VII.C.1 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$\begin{aligned}
 PE2_{quarterly} &= PE2_{annual} \div 4 \text{ quarters/year} \\
 &= 1,883 \text{ lb/year} \div 4 \text{ qtr/year} \\
 &= 471 \text{ lb PM}_{10}/\text{qtr}
 \end{aligned}$$

$$\begin{aligned}
 PE1_{quarterly} &= PE1_{annual} \div 4 \text{ quarters/year} \\
 &= 0 \text{ lb/year} \div 4 \text{ qtr/year} \\
 &= 0 \text{ lb PM}_{10}/\text{qtr}
 \end{aligned}$$

Quarterly NEC [QNEC]			
Pollutant	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	471	0	471
SO _x	72	0	72
PM ₁₀	166	0	166
CO	2,743	0	2,743
VOC	312	0	312