



JUN 19 2017

Louie de Groot
Outlaw Dairy
12775 Avenue 192
Tulare, CA 93274

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: S-7941
Project Number: S-1171713

Dear Mr. de Groot:

Enclosed for your review and comment is the District's analysis of Outlaw Dairy's application for an Authority to Construct for the installation of a 480 bhp Caterpillar Tier 3 certified diesel-fired emergency standby IC engine to power an electrical generator, at 12775 Avenue 192, Tulare.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. 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. Robert Gilles of Permit Services at (559) 230-5804.

Sincerely,

Arnaud Marjollet
Director of Permit Services

AM:RPG

Enclosures

cc: Tung Le, CARB (w/ enclosure) via email
cc: Blythe Romo, Innovative Ag Services, LLC (w/ enclosure) via email

Seyed Sadredin
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San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Diesel-Fired Emergency Standby IC Engine

Facility Name: Outlaw Dairy
Mailing Address: 12775 Avenue 192
Tulare, CA 93274

Date: June 7, 2017
Engineer: Robert Gilles
Lead Engineer: Joven Refuerzo

Contact Person: Blythe Romo, Innovative Ag Services
Telephone: (559) 587-2800
E-Mail: BRomo@innovativeag.net
Application #: S-7941-10-0
Project #: S-1171713
Deemed Complete: May 5, 2017

I. Proposal

Outlaw Dairy has requested an Authority to Construct (ATC) permit for the installation of a new 480 bhp Caterpillar model C9 Tier 3 certified diesel-fired emergency standby IC engine powering an electrical generator. Per the applicant, the proposed IC engine will be installed in place of the engine that was authorized by ATC S-7941-9-0. The facility never commenced construction of the equipment authorized by ATC '9-0; therefore, this action is not the result of a violation of District Rules and Regulations. ATC '10-0 will cancel and supersede ATC '9-0. The following condition will be included on ATC '10-0 as a mechanism to enforce compliance.

- This Authority to Construct (ATC) cancels and supersedes ATC S-7941-9-0. [District Rule 2201]

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 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)
California Health and Safety Code (CH&SC)	41700: Health Risk Assessment
California Health and Safety Code (CH&SC)	42301.6: School Notice

Public Resources Code (PRC)	21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14	15000-15387: CEQA Guidelines
California Code of Regulations, Title 17	93115: Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

III. Project Location

The facility is located at 12775 Avenue 192 in Tulare, CA. The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code (CH&SC) Section 42301.6 is not applicable to this project.

IV. Process Description

The proposed new emergency engine powers an electrical generator. Other than emergency standby operation, the engine may be operated up to 100 hours per year for maintenance and testing purposes.

V. Equipment Listing

S-7941-10-0: 480 BHP (INTERMITTENT) CATERPILLAR MODEL C9, SN XXXXXXXX, TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

VI. Emission Control Technology Evaluation

The applicant has proposed to install a Tier 3 certified compression ignition IC engine that is fired on very low-sulfur diesel fuel.

The proposed engine meets the latest Tier Certification requirements, as discussed in Appendix B; therefore, the engine meets the latest California Air Resources Board (CARB)/U.S. Environmental Protection Agency (EPA) emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide (see Appendix D for a copy of the manufacturer guaranteed emissions for the proposed IC engine).

The use of very low-sulfur diesel fuel (0.0015% by weight sulfur maximum) reduces SOx emissions by over 99% from standard diesel fuel.

VII. General Calculations

A. Assumptions

- PM_{2.5} emissions are conservatively assumed to be equal to PM₁₀ emissions
- Emergency operating schedule: 24 hours/day
- Non-emergency operating schedule: 100 hours/year
- Density of diesel fuel: 7.1 lb/gal
- EPA F-factor (adjusted to 60°F): 9,051 dscf/MMBtu
- Fuel heating value: 137,000 Btu/gal
- BHP to Btu/hr conversion: 2,542.5 Btu/bhp-hr
- Thermal efficiency of engine: commonly ≈ 35%
- PM₁₀ fraction of diesel exhaust: 0.96 (CARB, 1988)

B. Emission Factors

The emission factors in the following table are from the manufacturer for this engine. The manufacturer's guaranteed emissions are included in Appendix D.

Emission Factors		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	3.95	Manufacturer Guarantee
SO _x	0.0051	Mass Balance Equation Below
PM ₁₀	0.03	Manufacturer Guarantee
CO	0.24	Manufacturer Guarantee
VOC	0.06	Manufacturer Guarantee

Mass Balance Equation for SO_x

$$\begin{aligned}
 0.0015\% S \times \frac{7.1 \text{ lb - fuel}}{\text{gal - fuel}} \times \frac{2 \text{ lb - SO}_2}{\text{lb - S}} \times \frac{\text{gal - fuel}}{137,000 \text{ Btu}} \times \frac{\text{hp - input}}{0.35 \text{ hp - output}} \times \frac{2,542.5 \text{ Btu}}{\text{bhp - hr}} \times \frac{453.6 \text{ g}}{\text{lb}} \\
 = 0.0051 \frac{\text{g - SO}_x}{\text{bhp - hr}}
 \end{aligned}$$

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)

The daily and annual PE are calculated in the tables below using the following sample formulas.

Daily PE = Power Rating, bhp × EF, g/bhp-hr × Operation, hr/day ÷ 453.6 g/lb

Annual PE = Power Rating, bhp × EF, g/bhp-hr × Operation, hr/year ÷ 453.6 g/lb

Daily PE2					
Pollutant	EF (g/bhp-hr)	Power Rating (bhp)	Operation Limit (hr/day)	Conversion (g/lb)	PE2 (lb/day)
NOx	3.95	480	24	453.6	100.3
SOx	0.0051				0.1
PM ₁₀	0.03				0.8
CO	0.24				6.1
VOC	0.06				1.5

Annual PE2					
Pollutant	EF (g/bhp-hr)	Power Rating (bhp)	Operation Limit (hr/year)	Conversion (g/lb)	PE2 (lb/year)
NOx	3.95	480	100	453.6	418
SOx	0.0051				1
PM ₁₀	0.03				3
CO	0.24				25
VOC	0.06				6

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.

The SSPE1 values in the following table are from project S-1163584. Note that even though ATC '9-0 will be superseded with ATC '10-0, the SSPE2 values from project S-1163584 are valid as conservative (highest emissions) SSPE1 values for this project since ATC '9-0 is still a valid permit.

SSPE1 (lb/year)					
Permit Unit	NOx	SOx	PM ₁₀	CO	VOC
SSPE1	351	0	13,966	46	42,498

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.

The change in the SSPE with this project is the result of the cancelling ATC '9-0 and issuing ATC '10-0. Thus, SSPE2 is calculated in the following table.

SSPE2 (lb/year)					
Permit Unit	NOx	SOx	PM ₁₀	CO	VOC
SSPE1	351	0	13,966	46	42,498
Cancel Emergency IC Engine ATC S-7126-9-0	-351	0	-4	-46	-19
New Emergency IC Engine: S-7941-10-0	418	1	3	25	6
SSPE2	418	1	13,965	25	42,485

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 threshold values below. 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); or
- Fugitive emissions, except for the specific source categories specified in 40 CFR Section 51.165

The major source determination in the following table uses annual PE values for the dairy operations from project S-1163584 and annual PE values for ATC '10-0 calculated in Section VII.C.2 above. Note that PM_{2.5} emissions are assumed to be equal to PM₁₀ emissions for the purpose of the major source determination.

Rule 2201 Major Source Determination (lb/year)						
	NOx	SOx	PM ₁₀	PM _{2.5}	CO	VOC
Dairy Operations: S-7941-1-1, '2-0 through '5-0	0	0	0	0	0	1,055
Emergency IC Engine: S-7941-10-0	418	1	3	3	25	6
SSPE	418	1	3	3	25	1,061
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No	No

Rule 2410 Major Source Determination:

SSPE1 and SSPE2 are not above a PSD Major Source threshold for any pollutant; therefore, the facility cannot be a PSD Major Source and no further discussion is required.

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.

BE = Pre-Project Potential to Emit for:

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

otherwise,

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

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

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Section 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 pollutant 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 Section 51.165 and Part D of Title I of the CAA.

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

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

The project Potential to Emit, by itself, will not exceed any PSD Major Source thresholds; therefore, Rule 2410 is not applicable and no further discussion is required.

10. Quarterly Net Emissions Change (QNEC)

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

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions¹:

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

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

As seen in Section VII.C.2 above, the applicant is proposing to install a new diesel-fired IC engine with a PE greater than 2 lb/day for NO_x and CO. BACT is triggered only for NO_x for new units with PE > 2 lb/day purposes. Per Section 4.2.1 of District Rule 2201, BACT is not required for CO emissions from new or modified Stationary Sources with a SSPE2 of less than 200,000 lb/year. Since the CO SSPE2 is less than 200,000 lb/year, as demonstrated in Section VII.C.4 above, BACT is not triggered for CO for this purpose.

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 for this purpose.

¹ 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.

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 for this purpose.

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 or Federal Major Modification; therefore, BACT is not triggered for these purposes.

2. BACT Guideline

BACT Guideline 3.1.1, *Emergency Diesel IC Engine*, applies to the diesel-fired emergency IC engine in this project and is included in Appendix B.

3. Top-Down BACT Analysis

Per District Policy APR 1305, Section IX, “A top-down BACT analysis shall be performed as a part of the Application Review for each application subject to the BACT requirements pursuant to the District’s NSR Rule. For source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis.”

Pursuant to the attached top-down BACT Analysis in Appendix B, BACT is satisfied with the following:

NOx: Latest EPA Tier Certification level for applicable horsepower range

The certification requirements for diesel emergency IC engines are summarized in the following table. See Appendix B for additional information about applicable Tier certification requirements.

Certification Requirements for Diesel Emergency IC Engines	
Power Range	Certification Requirement
50 ≤ bhp < 75	Tier 4i
75 ≤ bhp < 750	Tier 3
≥ 750 bhp	Tier 2

The applicant has proposed the use of a diesel emergency IC engine that meets the required certification requirement as discussed in the attached top-down BACT analysis in Appendix B. The following conditions will be included on the ATC as a mechanism to enforce compliance.

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 3.95 g-NOx/bhp-hr, 0.24 g-CO/bhp-hr, or 0.06 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]

- {4772} Emissions from this IC engine shall not exceed 0.03 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115]

B. Offsets

1. Offset Applicability

Pursuant to Rule 2201, Section 4.62, offsets are not required for emergency IC engines. The engine in this project is an emergency IC engine; therefore, this exemption is applicable. However, for the purpose of tracking in the District's PAS database, the following table compares the SSPE2 values to the offset thresholds to determine if offsets are triggered but an exemption applies.

Offset Determination (lb/year)					
	NOx	SOx	PM ₁₀	CO	VOC
SSPE2	418	1	13,965	25	42,485
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets Triggered?	No	No	No	No	Yes

2. Quantity of Offsets Required

As shown in the table above, offsets are triggered for VOC emissions since the VOC SSPE2 value exceeds the offset trigger threshold. However, as previously discussed, the offset exemption from Section 4.6.2 is applicable to this project; therefore, offsets are not required and offset calculations are not necessary.

C. Public Notification

1. Applicability

Public noticing is required for:

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

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

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

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 these purposes is not required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day, for any pollutant, trigger public noticing requirements. The following table compares the daily PE for each pollutant with the public notice threshold.

PE > 100 lb/day Public Notice Threshold			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
NOx	100.3	100 lb/day	Yes
SOx	0.1	100 lb/day	No
PM ₁₀	0.8	100 lb/day	No
CO	6.1	100 lb/day	No
VOC	1.5	100 lb/day	No

As shown in the table above, the PE is greater than 100 lb/day for NOx; therefore, public noticing for this purpose is required.

c. Offset Threshold

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds will be surpassed with this project.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NOx	351	418	20,000 lb/year	No
SOx	0	1	54,750 lb/year	No
PM ₁₀	13,966	13,965	29,200 lb/year	No
CO	46	25	200,000 lb/year	No
VOC	42,498	42,485	20,000 lb/year	No

As detailed above, no offset threshold was surpassed as a result of this project; therefore, public noticing for this purpose is not required.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (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 Public Notice threshold 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?
NOx	418	351	67	20,000 lb/year	No
SOx	1	0	1	20,000 lb/year	No
PM ₁₀	13,965	13,966	-1	20,000 lb/year	No
CO	25	46	-21	20,000 lb/year	No
VOC	42,485	42,498	-13	20,000 lb/year	No

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

e. Title V Significant Permit Modification

Since this facility does not have a Title V operating permit, this change cannot result in a Title V Significant Permit Modification; therefore, public noticing for this purpose is not required.

2. Public Notice Action

As discussed above, public noticing is required for this project for NOx 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 published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

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

For this emergency IC engine, the DELs are stated in the form of emission factors, the maximum engine horsepower rating, and the maximum operational time of 24 hours per day. The following conditions will be included on the ATC as a mechanism to enforce compliance:

Proposed Rule 2201 (DEL) Conditions:

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 3.95 g-NOx/bhp-hr, 0.24 g-CO/bhp-hr, or 0.06 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]

- {4772} Emissions from this IC engine shall not exceed 0.03 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115]
- {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115]
- {modified 3810} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115]

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

The owner/operator will be required to monitor the number of hours the engine operates for emergency and nonemergency purposes. The following condition will be included on the ATC as a mechanism to enforce compliance.

- {modified 4749} This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rules 2201 and 4702, and 17 CCR 93115]

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification, and daily emission limit requirements of Rule 2201. The following conditions will be included on the ATC as a mechanism to enforce compliance.

- {modified 3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 2201 and 4702, and 17 CCR 93115]

- {modified 3475} All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 2201 and 4702, and 17 CCR 93115]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to Appendix C 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 discussed in Section VII.C.9 above, this project does not result in a new PSD Major Source or PSD major modification; therefore, the requirements of this rule are not applicable to this project.

Rule 2520 Federally Mandated Operating Permits

As shown in Section VII.C.5 above, this facility's Potential to Emit does not exceed any major source threshold in Rule 2201; therefore, the requirements of this rule are not applicable to this project.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR) and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

40 CFR 60 Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

The District has not been delegated the authority to implement this NSPS regulation for non-major source facilities; therefore, compliance with the provisions of Subpart III will not be demonstrated for the engine in this project.

Rule 4002 National Emission Standards for Hazardous Air Pollutants

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63.

40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Emissions (RICE)

The District has not been delegated the authority to implement Area Source requirements from NESHAP regulations for non-major source facilities; therefore, compliance with the provisions of Subpart ZZZZ will not be demonstrated for the engine in this project.

Rule 4101 Visible Emissions

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. Therefore, the following condition will be included on the ATC as a mechanism to enforce 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 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Public nuisance conditions are not expected as a result of this operation provided the equipment is well maintained. Therefore, the following condition will be included on the ATC as a mechanism to enforce compliance:

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

A Health Risk Assessment (HRA) is not required for a project with a total facility prioritization score of less than one. According to the Risk Management Review (RMR) Summary for this project (Appendix C), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

Risk Management Review (RMR) Summary			
Categories	Emergency IC Engine	Project Totals	Facility Totals
Prioritization Score	N/A	N/A	>1
Acute Hazard Index	N/A	N/A	0.0
Chronic Hazard Index	0.00	0.0	0.0
Maximum Individual Cancer Risk	8.23E-07	8.23E-07	8.23E-07
T-BACT Required?	No		
Special Permit Conditions?	Yes		

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., greater than 1 for acute and chronic indices and greater than 20 in a million for cancer risk). As outlined by the RMR Summary in Appendix C, the emissions increases for this project were determined to be less than significant.

The following conditions will be included on the ATC as a mechanism to enforce compliance:

- {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
- {4772} Emissions from this IC engine shall not exceed 0.03 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115]
- {modified 3810} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115]

Rule 4201 Particulate Matter Concentration

The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission standard. This rule shall apply to any source operation which emits or may emit dust,

fumes, or total suspended particulate matter. Section 3 of the rule requires that a person shall not release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions.

The following calculation determines the maximum PM emission rate that would be allowed without exceeding the 0.1 grain per dry standard cubic foot standard. The PM emission factor for the proposed engine is then compared to the maximum allowable emission rate.

Note that as previously mentioned, the PM₁₀ fraction of PM is assumed to be 96% for diesel engine exhaust.

$$0.1 \frac{\text{grain-PM}}{\text{dscf}} \times \frac{\text{g}}{15.43 \text{ grain}} \times \frac{1 \text{ Btu}_{in}}{0.35 \text{ Btu}_{out}} \times \frac{9,051 \text{ dscf}}{10^6 \text{ Btu}} \times \frac{2,542.5 \text{ Btu}}{1 \text{ bhp-hr}} \times \frac{0.96 \text{ g-PM}_{10}}{\text{g-PM}} = 0.4 \frac{\text{g-PM}_{10}}{\text{bhp-hr}}$$

The PM₁₀ emission factor for the proposed new engine is less than 0.4 g/bhp-hr; therefore, compliance with this rule is expected. The following condition will be included on the ATC as a mechanism to enforce compliance:

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

Rule 4701 Internal Combustion Engines – Phase 1

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 50 bhp that requires a PTO.

Section 4 – Exemptions

Pursuant to Section 4.1, the provisions of this rule do not apply to engines in agricultural operations in growing of crops or raising of fowl or animals. Since the proposed engine is to support the dairy operation, this exemption is applicable to the engine in this project and the provisions of this rule are not applicable. The following condition will be included on the ATC as a mechanism to enforce compliance.

- {modified 4002} This IC engine shall only be used for the growing and harvesting of crops or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution. [District Rule 4701 and 17 CCR 93115]

Rule 4702 Internal Combustion Engines

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

engines. Except as provided in Section 4.0, this rule applies to any internal combustion engine rated at 25 brake horsepower or greater.

Section 4 – Exemptions

Section 4.2 provides an exemption from the requirements of the rule, except for the requirements of Sections 5.9 and 6.2.3 for the following:

- 4.2 An emergency standby engine or a low-use engine, provided that the engine is operated with an operating nonresettable time meter.
 - 4.2.1 In lieu of operating a nonresettable elapsed time meter, the operator may use an alternative device, method, or technique, in determining operating time, provided that the alternative is approved by the APCO and EPA and is allowed by the Permit-to-Operate or Permit-Exempt Equipment Registration. The operator must demonstrate that the alternative device, method, or technique is equivalent to using a nonresettable elapsed time meter.
 - 4.2.2 The operator shall properly maintain and operate the nonresettable elapsed time meter or alternative device in accordance with the manufacturer's instructions.

The proposed engine meets the requirements of the Section 4.2 exemption. Therefore, only the requirements of Sections 5.9 and 6.2.3 of the rule are applicable to the engine in this project. The following conditions will be included on the ATC as a mechanism to enforce compliance.

- {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702 and 17 CCR 93115]
- {modified 4749} This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rules 2201 and 4702, and 17 CCR 93115]
- {modified 3810} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115]

Section 5.9 – Monitoring Requirements

Section 5.9.1 requires the operator of any of the following engines to comply with the requirements of Section 5.9.2 through Section 5.9.5:

- 5.9.1.1 An AO spark-ignited engine subject to the requirements of section 5.2;
- 5.9.1.2 A compression-ignited engine subject to the requirements of section 5.2; or
- 5.9.1.3 An engine subject to section 4.2.

As previously discussed, the engine in this project is subject to the Section 4.2 exemption; therefore, the engine is subject to the requirements of Section 5.9.2 through Section 5.9.5.

Section 5.9.2 requires the operator of the engine to properly operate and maintain the engine as recommended by the engine manufacturer.

Section 5.9.3 requires the operator of the engine to monitor the engine as recommended by the engine manufacturer or emission control system supplier.

Section 5.9.4 requires the operator of the engine to install and operate a nonresettable elapsed time meter and to properly install and operate the nonresettable elapsed time meter in accordance with the manufacturer's instructions.

The following conditions will be included on the ATC as a mechanism to enforce compliance with the requirements of Section 5.9.2 through Section 5.9.4.

- {4261} 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]
- {3478} During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables, and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
- {modified 4749} This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rules 2201 and 4702, and 17 CCR 93115]

Section 5.9.5 outlines requirements for the operator of an AO spark-ignited engine that has been retro-fitted with a NOx exhaust control system. The engine in this project is not a spark-ignited engine; therefore, the engine in this project is not subject to the requirements of Section 5.9.5.

Section 6.2 – Recordkeeping

The provisions of Sections 6.2.1 and 6.2.2 are not applicable to the engine in this project; therefore, the provision from these sections will not be discussed.

Section 6.2.3 requires an operator claiming an exemption under Section 4.2 or Section 4.3 to maintain annual operating records. This information shall be retained for at least five years, shall be readily available, and provided to the APCO upon request. The records shall include the following:

- 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.

Compliance with the recordkeeping requirements of this rule is expected. The following conditions will be included on the ATC as a mechanism to enforce compliance.

- {modified 3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 2201 and 4702, and 17 CCR 93115]
- {modified 3475} All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 2201 and 4702, and 17 CCR 93115]
- {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]

Compliance with the requirements of this rule for the proposed engine is expected. Conditions will be included on the ATC permit, as outlined above, as a mechanism to enforce compliance with all applicable requirements. No further discussion is required.

Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO₂) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = (n \times R \times T) \div P$$

Where;

n = moles SO₂

T = standard temperature: 60°F or 520°R

R = universal gas constant: $\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}}$

Volume SO₂ =

$$\frac{0.000015 \text{ lb} - \text{S}}{\text{lb} - \text{fuel}} \times \frac{7.1 \text{ lb}}{\text{gal}} \times \frac{64 \text{ lb} - \text{SO}_2}{32 \text{ lb} - \text{S}} \times \frac{1 \text{ MMBtu}}{9,051 \text{ scf}} \times \frac{1 \text{ gal}}{0.137 \text{ MMBtu}} \times \frac{\text{lb} - \text{mol}}{64 \text{ lb} - \text{SO}_2} \times \frac{10.73 \text{ psi} - \text{ft}^3}{\text{lb} - \text{mol} - ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times 1,000,000$$

Volume SO₂ = 1.0 ppmv SO₂

Since 1.0 ppmv is ≤ 2,000 ppmv, this engine is expected to comply with Rule 4801. The following condition will be included on the ATC as a mechanism to enforce compliance:

- {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115]

Title 17 California Code of Regulations (CCR), Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

The purpose of this Airborne Toxic Control Measure (ATCM) is to reduce diesel particulate matter (PM) and criteria pollutant emissions from stationary diesel-fueled compression ignition (CI) engines.

§93115.2 – Applicability

Per 93115.2(a), except as provided in §93115.3, this ATCM applies to any person who either sells a stationary CI engine, offers a stationary CI engine for sale, leases a stationary CI engine, or purchases a stationary CI engine for use in California, unless such engine is:

- (1) a portable CI engine,
- (2) a CI engine used to provide motive power,
- (3) an auxiliary CI engine used on a marine vessel, or
- (4) an agricultural wind machine as defined in section 93115.4.

The requirements of this ATCM are applicable to this project.

§93115.3 – Exemptions

Section 93115.3(a) provides that the in-use stationary diesel agricultural emission standards and other requirements of §93115.8(b) do not apply to agricultural emergency standby generator set engines equipped with nonresettable hour meters with a minimum display capability of 9,999 hours. The proposed engine is a new (not in-use) IC engine; therefore, this exemption is not applicable to the engine in this project.

Section 93115.3(b) provides that the requirements specified in §93115.6, §93115.7, and §93115.10(a) do not apply to new or in-use stationary diesel-fueled CI engines used in agricultural operations. The proposed engine is a new stationary diesel-fueled CI engine used in an agricultural operation; therefore, the requirements of §93115.6, §93115.7, and §93115.10(a) do not apply to the engine in this project. The following condition will be included on the ATC as a mechanism to enforce compliance.

- {modified 4002} This IC engine shall only be used for the growing and harvesting of crops or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution. [District Rule 4701 and 17 CCR 93115]

There are no other exemptions that are applicable to the engine in this project.

§93115.5 – Fuel and Fuel Additive Requirements

Per §93115.5(a), a new stationary CI engine shall be fueled only with the following fuels:

- (1) CARB Diesel Fuel; or
- (2) an alternative diesel fuel that is:
 - (A) biodiesel;
 - (B) a biodiesel blend that does not meet the definition of CARB Diesel Fuel;
 - (C) a Fischer-Tropsch fuel; or
 - (D) an emulsion of water in diesel fuel; or
- (3) any alternative diesel fuel that is not identified in section 93115.5(a)(2) above and meets the requirements of the Verification Procedure; or
- (4) an alternative fuel; or
- (5) CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure; or
- (6) any combination of 93115.5(a)(1) through (5) above.

The applicant has proposed the use of CARB-certified diesel fuel which meets the requirements of §93115.5(a)(1); therefore, compliance with this requirement is expected. The following condition will be included on the ATC as a mechanism to enforce compliance.

- {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115]

§93115.8 – Emission Standards for Stationary Diesel-Fueled CI Engines (>50 bhp) Used in Agricultural Operations

§93115.8(a)(1) requires compliance with the emission performance standards in Table 6 for all new diesel-fueled engines with a power rating greater than 50 bhp used in agricultural operations. The applicable requirements from Table 6 are summarized in the following table:

Summary of the Emission Standards for New Stationary Diesel-Fueled CI Engines >50 bhp Used in Agricultural Operations		
Horsepower Range (bhp)	Diesel PM	Other Pollutants
	Diesel PM Standard (g/bhp-hr)	HC, NOx, NMHC+NOx, and CO Standards (g/bhp-hr)
Generator Set Engines Greater than 50	≤ 0.15 OR Off-Road CI Engine Certification Standards for an off-road engine of the same maximum rated power, whichever is more stringent	Off-Road CI Engine Certification Standard for an off-road engine of the model year and maximum rated power of the engine installed to meet the applicable PM standard

The certification requirements for diesel emergency IC engines are summarized in the following table. See Appendix B for additional information about applicable Tier certification requirements.

Certification Requirements for Diesel Emergency IC Engines	
Power Range	Certification Requirement
$50 \leq \text{bhp} < 75$	Tier 4i
$75 \leq \text{bhp} < 750$	Tier 3
≥ 750 bhp	Tier 2

The applicant has proposed the installation of a diesel emergency IC engine that meets the required certification requirement as discussed in the attached top-down BACT analysis in Appendix B. The following conditions will be included on the ATC as a mechanism to enforce compliance.

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 3.95 g-NOx/bhp-hr, 0.24 g-CO/bhp-hr, or 0.06 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
- {4772} Emissions from this IC engine shall not exceed 0.03 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115]

§93115.10 – Recordkeeping, Reporting, and Monitoring Requirements

Section 93115.10(a) outlines information that must be submitted to the District by each owner or operator prior to the installation of any new stationary CI engine at a facility. As previously discussed, §93115.10(a) is not applicable to the proposed engine per §93115.3(b).

Section 93115.10(b) requires the owner or operator to submit to the District emissions data for the purposes of demonstrating compliance with the emission standards from §93115.6 and §93115.7. As previously discussed, §93115.6 and §93115.7 are not applicable to the proposed engine per §93115.3(b); therefore, §93115.10(b) is not applicable.

Section 93115.10(d)(1) requires that a non-resettable hour meter with a minimum display capability of 9,999 hours be installed upon engine installation unless the District determines on a case-by-case basis that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or

operator's compliance history. The following condition will be included on the ATC as a mechanism to enforce compliance:

- {modified 4749} This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rules 2201 and 4702, and 17 CCR 93115]

Section 93115.10(d)(2) requires that all diesel particulate filters (DPFs) installed pursuant to the requirements of this ATCM must, upon engine installation, be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. Since the proposed engine is not equipped with a DPF, this section is not applicable.

Section 93115.10(e) outlines reporting provisions for owners or operators of exempted agricultural emergency, prime, and nonagricultural engines subject to §93115.3(a), §93115.3(d), or §93115.3(j). The proposed engine is not subject to §93115.3(a), §93115.3(d), or §93115.3(j); therefore, this section is not applicable.

Section 93115.10(f) requires the owner or operator of an emergency standby engine to keep records and prepare a monthly summary that lists each of the following. Records shall be retained for a minimum of 36 months.

- (A) emergency use hours of operation;
- (B) maintenance and testing hours of operation;
- (C) hours of operation for emission testing to show compliance with sections 93115.6(a)(3) and 93115.6(b)(3);
- (D) initial start-up testing hours;
- (E) if applicable, hours of operation to comply with the requirements of NFPA 25;
- (F) hours of operation for all uses other than those specified in sections 93115.10(g)(1)(A) through (D) above; and
- (G) if applicable, DRP engine hours of operation, and
- (H) the fuel used.
 1. For engines operated exclusively on CARB Diesel Fuel, the owner or operator shall document the use of CARB Diesel Fuel through the retention of fuel purchase records indicating that the only fuel purchased for supply to an emergency standby engine was CARB Diesel Fuel; or
 2. For engines operated on any fuel other than CARB Diesel Fuel, fuel records demonstrating that the only fuel purchased and added to an emergency standby engine or engines, or to any fuel tank directly attached to an emergency standby engine or engines, meets the requirements of section 93115.5(b).

The following conditions will be included on the ATC as a mechanism to enforce compliance with the applicable recordkeeping requirements of §93115.10(f).

- {modified 3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 2201 and 4702, and 17 CCR 93115]
- {modified 3475} All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 2201 and 4702, and 17 CCR 93115]

Compliance with the requirements of this ATCM for the proposed engine is expected. Conditions will be included on the ATC permit, as outlined above, as a mechanism to enforce compliance with all requirements. No further discussion is required.

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)

The California Environmental Quality Act (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 San Joaquin Valley Unified Air Pollution Control District (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.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project qualifies for ministerial approval under the District's Guideline for Expedited Application Review (GEAR). Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

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 are 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.

As described above, the project requires only ministerial approval, and is exempt from the provisions of CEQA. As such, an Indemnification Agreement or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue ATC S-7941-10-0 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
S-7941-10-0	3020-10-D	480 bhp IC engine	\$525.00

Appendixes

- A: Draft ATC
- B: BACT Guideline and Top-Down BACT Analysis
- C: RMR/AAQA Summary
- D: Manufacturer Guaranteed Emissions
- E: Quarterly Net Emissions Change (QNEC) Calculation

APPENDIX A
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-7941-10-0

LEGAL OWNER OR OPERATOR: OUTLAW DAIRY
MAILING ADDRESS: 12775 AVENUE 192
TULARE, CA 93274

LOCATION: 12775 AVENUE 192
TULARE, CA 93274

EQUIPMENT DESCRIPTION:

480 BHP (INTERMITTENT) CATERPILLAR MODEL C9, SN XXXXXXXX, TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

CONDITIONS

1. This Authority to Construct (ATC) cancels and supersedes ATC S-7941-9-0. [District Rule 2201]
2. {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]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. {4261} 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]
6. {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115]
7. This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rules 2201 and 4702, and 17 CCR 93115]
8. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

S-7941-10-0 : Jun 7 2017 4:11PM -- GILLESB : Joint Inspection NOT Required

9. This IC engine shall only be used for the growing and harvesting of crops or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution. [District Rule 4701 and 17 CCR 93115]
10. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115]
11. {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702 and 17 CCR 93115]
12. Emissions from this IC engine shall not exceed any of the following limits: 3.95 g-NO_x/bhp-hr, 0.24 g-CO/bhp-hr, or 0.06 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
13. Emissions from this IC engine shall not exceed 0.03 g-PM₁₀/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115]
14. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables, and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
15. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 2201 and 4702, and 17 CCR 93115]
16. {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
17. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201 and 4702, and 17 CCR 93115]

DRAFT

APPENDIX B

BACT Guideline and Top-Down Analysis

**Best Available Control Technology (BACT) Guideline 3.1.1
Last Update: 9/10/2013**

Emergency Diesel IC engine

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Latest EPA Tier Certification level for applicable horsepower range*		
NOx	Latest EPA Tier Certification level for applicable horsepower range*		
PM10	0.15 g/bhp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)		
SOx	Very low sulfur diesel fuel (15 ppmw sulfur or less)		
VOC	Latest EPA Tier Certification level for applicable horsepower range*		

**Note: for emergency engines 50 ≤ bhp < 75, Tier 4 Interim certification is the requirement; for emergency engines 75 ≤ bhp < 750, Tier 3 certification is the requirement; for emergency engines ≥ 750 bhp, Tier 2 certification is the requirement.*

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

This is a Summary Page for this Class of Source. For background information, see Permit Specific BACT Determinations on [Details Page](#).

Top Down BACT Analysis for the Emergency IC Engine

BACT Guideline 3.1.1 (September 10, 2013) applies to emergency diesel IC engines. In accordance with the District's BACT policy, APR 1305, information from the BACT guideline will be utilized without further analysis.

1. BACT Analysis for NO_x Emissions:

a. Step 1 - Identify all control technologies

BACT Guideline 3.1.1 identifies only the following option:

- *Latest EPA Tier Certification level for applicable horsepower range*

To determine the latest applicable Tier level, the following EPA and state regulations were consulted:

- 40 CFR Part 89 – Control of Emissions from New and In-Use Nonroad Compression – Ignition Engines
- 40 CFR Part 1039 – Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines
- Title 13 CCR, Section 2423 – Exhaust Emission Standards and Test Procedures - Off-Road Compression-Ignition Engines
- Title 17 CCR, Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

40 CFR Parts 89 and 1039, which apply only to nonroad engines, do not apply because the proposed emergency engine does not meet the definition of a nonroad engine. Likewise, 13 CCR Section 2423, which only applies to offroad engines, does not apply because the proposed emergency engine does not meet the definition of an offroad engine. Therefore, only 17 CCR Section 93115 (Stationary Diesel ATCM) emission levels are applicable to the proposed emergency engine.

Title 17 CCR Section 93115.6(a)(3)(A) applies to emergency diesel-fired engines and requires that such engines be certified to the emission levels in Table 1 of the Stationary Diesel ATCM. The Table 1 emission factors are provided below for reference.

17 CCR §93115 Table 1: Emission Standards for New Stationary Emergency Standby Diesel-Fueled CI Engines g/bhp-hr (g/kW-hr)					
Maximum Engine Power	Tier	Model Year(s)	PM	NMHC+NOx	CO
50 ≤ HP < 75 (37 ≤ kW < 56)	2	2007	0.15 (0.20)	5.6 (7.5) 3.5 (4.7)	3.7 (5.0)
	4i	2008+			
75 ≤ HP < 100 (56 ≤ kW < 75)	2	2007	0.15 (0.20)	5.6 (7.5) 3.5 (4.7)	3.7 (5.0)
	3	2008+			
100 ≤ HP < 175 (75 ≤ kW < 130)	3	2007	0.15 (0.20)	3.0 (4.0)	3.7 (5.0)
		2008+			
175 ≤ HP < 300 (130 ≤ kW < 225)	3	2007	0.15 (0.20)	3.0 (4.0)	2.6 (3.5)
		2008+			
300 ≤ HP < 600 (225 ≤ kW < 450)	3	2007	0.15 (0.20)	3.0 (4.0)	2.6 (3.5)
		2008+			
600 ≤ HP ≤ 750 (450 ≤ kW ≤ 560)	3	2007	0.15 (0.20)	3.0 (4.0)	2.6 (3.5)
		2008+			
HP > 750 (kW > 560)	2	2007	0.15 (0.20)	4.8 (6.4)	2.6 (3.5)
		2008+			

Since the Title 17 CCR Section 93115 ATCM contains the only applicable emission levels and Tier certifications, the most stringent applicable emission levels are those listed in the Stationary Diesel ATCM. A description of the engine power ranges and corresponding Tier certification is provided below.

For IC engines rated greater than or equal to 50 hp and less than 75 hp, the required certification is Interim Tier 4 (Tier 4i). For IC engines rated greater than or equal to 75 hp and less than 750 hp, the required certification is Tier 3. For engines rated equal to or greater than 750 hp, the required certification is Tier 2.

Also, please note that neither the Stationary Diesel ATCM nor the Code of Federal Regulations require the installation of IC engines meeting a higher Tier standard than those listed above for emergency applications due to concerns regarding the effectiveness of the exhaust emissions controls during periods of short-term operation (such as testing operational readiness of an emergency engine).

The proposed engine is rated at 480 bhp; therefore, the applicable control option is Tier 3 certification.

b. Step 2 - Eliminate technologically infeasible options

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

c. Step 3 - Rank remaining options by control effectiveness

Per APR 1305, no ranking needs to be done because the applicant has proposed the Achieved-in-Practice control option.

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the only control that has not been eliminated from consideration. Therefore, per the District's BACT policy, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for NO_x is the use of a Tier 3 certified engine. The applicant is proposing an engine meeting this requirement. Therefore, BACT for NO_x is satisfied.

APPENDIX C
RMR/AAQA Summary

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Robert Gilles – Permit Services
 From: Seth Lane– Technical Services
 Date: June 5, 2017
 Facility Name: Outlaw Dairy
 Location: 12775 Ave. 192, Tulare
 Application #(s): S-7941-10-0
 Project #: S-1171713

A. RMR SUMMARY

RMR Summary						
Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required?	Special Permit Requirements?
Unit 10-0 (480 BHP DICE)	N/A ¹	N/A ²	0.00	8.23E-07	No	Yes
Project Totals	N/A ¹	N/A ²	0.0	8.23E-07		
Facility Totals	>1	0.0	0.0	8.23E-07		

¹Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.

²Acute Hazard Indices were not calculated since there is no risk factor or the risk factor is so low that it has been determined to be insignificant for this type of unit.

Proposed Permit Requirements

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

Unit # 2-0

1. The PM10 emissions rate shall not exceed 0.03 g/bhp-hr based on US EPA certification using ISO 8178 test procedure.
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.
3. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year.

B. RMR REPORT

I. Project Description

Technical Services received a request on May 25, 2017, to perform an Ambient Air Quality Analysis and a Risk Management Review for diesel-fired emergency IC engine rated at 480 bhp.

II. Analysis

Toxic emissions for this proposed unit were calculated and provided by the processing engineer, and input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0. The prioritization score for this proposed facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required. The AERMOD model was used, with the parameters outlined below and meteorological data for 2007-2011 from Tipton to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 10-0			
Source Type	Point	Location Type	Rural
Stack Height (m)	2.26	Closest Receptor (m)	797.14
Stack Diameter. (m)	0.10	Type of Receptor	Residential
Stack Exit Velocity (m/s)	143.26	Max Hours per Year	100
Stack Exit Temp. (°K)	505.22	Fuel Type	Diesel
PM10 Emissions Rate Increase (lb/hr)	0.03	PM10 Emissions Rate Increase (lb/yr)	3

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

Unit #	NO _x (Lbs.)		SO _x (Lbs.)		CO (Lbs.)		PM ₁₀ (Lbs.)	
	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.
10-0	0	418	0	1	0	25	0	3

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

	Background Site	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Fresno – Drummond (2015)	NA ¹	X	NA ¹	X	X
NO _x	Visalia-Church (2015)	NA ¹	X	X	X	Pass
SO _x	Fresno – Garland (2016)	NA ¹	NA ¹	X	NA ¹	Pass
PM ₁₀	Visalia-Church (2016)	X	X	X	NA ¹	Pass ²
PM _{2.5}	Visalia-Church (2015)	X	X	X	NA ¹	Pass ³

*Results were taken from the attached PSD spreadsheet.

¹The project is an intermittent source as defined in APR-1920. In accordance with APR-1920, compliance with short-term (i.e., 1-hour, 3-hour, 8-hour, and 24-hour) standards is not required.

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

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

III. Conclusion

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

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

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

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

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. AAQA Report
- D. Facility Summary

APPENDIX D
Manufacturer Guaranteed Emissions

GENSET POWER WITH FAN	EKW	300.0	225.0	150.0	75.0	30.0
ENGINE POWER	BHP	480	361	253	149	82.9
PERCENT LOAD	%	100	75	50	25	10

RATED SPEED NOMINAL DATA: 1800 RPM

GENSET POWER WITH FAN	EKW	300.0	225.0	150.0	75.0	30.0
ENGINE POWER	BHP	480	361	253	149	82.9
PERCENT LOAD	%	100	75	50	25	10
TOTAL NOX (AS NO2)	G/HR	1,881	970	499	267	201
TOTAL CO	G/HR	115	89	129	109	102
TOTAL HC	G/HR	26	29	43	40	35
TOTAL CO2	KG/HR	225	175	135	86	51
PART MATTER	G/HR	15.5	15.2	34.2	22.5	14.6
TOTAL NOX (AS NO2)	(CORR 5% O2) MG/NM3	2,196.0	1,456.1	978.0	821.3	1,152.5
TOTAL CO	(CORR 5% O2) MG/NM3	115.5	117.0	221.7	309.8	521.3
TOTAL HC	(CORR 5% O2) MG/NM3	23.1	33.0	63.3	96.7	146.2
PART MATTER	(CORR 5% O2) MG/NM3	12.7	17.6	52.2	50.4	64.7
TOTAL NOX (AS NO2)	(CORR 5% O2) PPM	1,070	709	476	400	561
TOTAL CO	(CORR 5% O2) PPM	92	94	177	248	417
TOTAL HC	(CORR 5% O2) PPM	43	62	118	180	273
TOTAL NOX (AS NO2)	G/HP-HR	3.95	2.70	1.98	1.79	2.42
TOTAL CO	G/HP-HR	0.24	0.25	0.51	0.73	1.23
TOTAL HC	G/HP-HR	0.06	0.08	0.17	0.27	0.42
PART MATTER	G/HP-HR	0.03	0.04	0.14	0.15	0.18
TOTAL NOX (AS NO2)	LB/HR	4.15	2.14	1.10	0.59	0.44
TOTAL CO	LB/HR	0.25	0.20	0.29	0.24	0.22
TOTAL HC	LB/HR	0.06	0.06	0.09	0.09	0.08
TOTAL CO2	LB/HR	496	387	297	189	112
PART MATTER	LB/HR	0.03	0.03	0.08	0.05	0.03
OXYGEN IN EXH	%	9.2	11.2	12.6	13.6	15.0
DRY SMOKE OPACITY	%	0.3	0.4	1.0	0.8	0.8
BOSCH SMOKE NUMBER		0.07	0.20	0.90	0.76	0.68

Emission notes

*NOx
CO
VOC
PM*

Regulatory Information ^{Top}

EPA TIER 3		2005 - 2010			
GASEOUS EMISSIONS DATA MEASUREMENTS PROVIDED TO THE EPA ARE CONSISTENT WITH THOSE DESCRIBED IN EPA 40 CFR PART 89 SUBPART D AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. THE "MAX LIMITS" SHOWN BELOW ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE NON-ROAD REGULATIONS.					
Locality	Agency	Regulation	Tier/Stage	Max Limits - G/BKW - HR	
U.S. (INCL CALIF)	EPA	NON-ROAD	TIER 3	CO: 3.5 NOx + HC: 4.0 PM: 0.20	
EPA EMERGENCY STATIONARY		2011 - ----			
GASEOUS EMISSIONS DATA MEASUREMENTS PROVIDED TO THE EPA ARE CONSISTENT WITH THOSE DESCRIBED IN EPA 40 CFR PART 60 SUBPART IIII AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. THE "MAX LIMITS" SHOWN BELOW ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE EMERGENCY STATIONARY REGULATIONS.					
Locality	Agency	Regulation	Tier/Stage	Max Limits - G/BKW - HR	
U.S. (INCL CALIF)	EPA	STATIONARY	EMERGENCY STATIONARY	CO: 3.5 NOx + HC: 4.0 PM: 0.20	

Altitude Derate Data ^{Top}

ALTITUDE CORRECTED POWER CAPABILITY (BHP)

AMBIENT OPERATING TEMP (F)	30	40	50	60	70	80	90	100	110	120	130	140	NORMAL
ALTITUDE (FT)													
0	480	480	480	480	480	477	474	465	452	433	412	395	478
1,000	480	480	480	480	477	475	470	457	441	422	402	386	476
2,000	480	480	479	477	474	470	463	446	427	410	392	376	473
3,000	480	478	475	470	463	457	449	434	418	403	386	370	464
4,000	475	469	463	456	450	444	436	422	407	391	374	358	453
5,000	462	456	449	442	436	430	422	408	393	377	360	343	442
6,000	449	442	435	428	422	416	408	394	379	362	346	329	430

APPENDIX E
QNEC Calculation

Quarterly Net Emissions Change (QNEC) Calculation

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

$QNEC = PE2 - PE1$, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr

PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr

PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr

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

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

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

Quarterly NEC [QNEC]			
Pollutant	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NOx	104.50	0.00	104.50
SOx	0.25	0.00	0.25
PM ₁₀	0.75	0.00	0.75
CO	6.25	0.00	6.25
VOC	1.50	0.00	1.50