



September 24, 2026

Mr. Samuel Nadores
Fresno/Clovis Regional WWTP
747 R St, 2nd Floor
Fresno, CA 93721

**Re: Notice of Preliminary Decision – ATC / Certificate of Conformity
District Facility # C-545
Project # 1261114**

Dear Mr. Nadores:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project is for the installation of three 3,629 bhp lean-burn natural gas-fired emergency standby IC engines powering electrical generators.

The notice of preliminary decision for this project has been posted on the District's website (<https://valleyair.org/>). After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

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

Thank you for your cooperation in this matter.

Sincerely,

Brian Clements
Director of Permit Services

Enclosures

cc: Courtney Graham, CARB (w/enclosure) via email
cc: EPA Region 9 Air Permitting Manager (w/enclosure) via EPS

Samir Sheikh

Executive Director/Air Pollution Control Officer

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4800 Enterprise Way
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San Joaquin Valley Air Pollution Control District

Authority to Construct Permit Application Review

Natural Gas-Fired Emergency Standby IC Engines

Facility Name: Fresno/Clovis Regional WWTP Date: August 22, 2026
Mailing Address: 747 R St 2nd Floor Engineer: Tim Bush
Fresno, CA 93721 Lead Engineer: Brian Clerico
Facility Contact Person: Samuel Nadores
Contact Telephone: (559) 621-8838
Contact E-Mail: Samuel.nadores@fresno.gov
Application #s: C-535-59-0, '-60-0, '-61-0
Project #: C-1261114
Date Deemed Complete: April 15, 2026

I. Proposal

Fresno/Clovis Regional WWTP is proposing to install three 3,629 bhp (intermittent) Caterpillar model G3520 lean-burn natural gas-fired emergency standby internal combustion (IC) engines powering electrical generators. The draft ATCs are included in Appendix A.

Fresno/Clovis Regional WWTP received their Title V Permit on March 20, 2001. This modification can be classified as a Title V minor modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Fresno/Clovis Regional WWTP must apply to administratively amend their Title V permit.

Rule 1081	Source Sampling (12/16/1993)
Rule 2201	New and Modified Stationary Source Review Rule (4/20/23)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/20/24)
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 (4/16/26)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4701	Stationary Internal Combustion Engines – Phase 1 (8/21/03)
Rule 4702	Internal Combustion Engines (8/19/21)
Rule 4801	Sulfur Compounds (12/17/92)

40 CFR Part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
40 CFR Part 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

CH&SC 41700 General Limitations

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 facility is located at 5607 W Jensen Avenue in Fresno, 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 emergency standby engines powers electrical generators. Other than emergency operation, each engine may be operated up to 45 hours per year for maintenance and testing purposes.

V. Equipment Listing

C-535-59-0: 3,629 BHP (INTERMITTENT) CATERPILLAR MODEL G3520 LEAN-BURN NATURAL GAS-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

C-535-60-0: 3,629 BHP (INTERMITTENT) CATERPILLAR MODEL G3520 LEAN-BURN NATURAL GAS-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

C-535-61-0: 3,629 BHP (INTERMITTENT) CATERPILLAR MODEL G3520 LEAN-BURN NATURAL GAS-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

VI. Emission Control Technology Evaluation

The engine is equipped with:

- ☐ Positive Crankcase Ventilation (PCV) or 90% efficient control device
- ☐ Non-Selective Catalytic Reduction
- ☒ Air/Fuel Ratio or an O₂ Controller
- ☒ Lean Burn Technology

The fuel/air ratio controller, (oxygen controller) is used in conjunction with the lean burn technology to maintain the amount of oxygen in the exhaust stream to optimize combustion.

Lean burn technology increases the volume of air in the combustion process and therefore increases the heat capacity of the mixture. This technology also incorporates improved swirl

patterns to promote thorough air/fuel mixing. This in turn lowers the combustion temperature and reduces NO_x formation.

VII. General Calculations

A. Assumptions

Emergency operating schedule: 24 hours/day
 Non-emergency operating schedule: 45 hours/year (per applicant)
 EPA F-factor (adjusted to 60 °F): 8,578 dscf/MMBtu (40 CFR 60 Appendix B)
 Fuel heating value: 1,000 Btu/dscf (District Policy APR-1720, dated 12/20/01)
 BHP to Btu/hr conversion: 2,542.5 Btu/bhp-hr
 Sulfur concentration: 2.85 lb-S/MMscf (District Policy APR-1720, dated 12/20/01)
 Thermal efficiency of engine: commonly ≈ 35%
 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

Natural Gas-fired IC Engine Emission Factors		
Pollutant	g/bhp-hr	Source
NO _x	0.5	Engine Manufacturer
*SO _x	0.0094	Mass Balance Equation Below
**PM ₁₀	0.033	AP-42 (7/00) Table 3.2-2
CO	1.31	Engine Manufacturer
VOC	0.36	Engine Manufacturer

*SO_x is calculated as follows:

$$0.00285 \frac{\text{lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{1 \text{ MMBtu}}{1,000,000 \text{ Btu}} \times \frac{2,542.5 \text{ Btu}}{\text{bhp} - \text{hr}} \times \frac{1 \text{ bhp input}}{0.35 \text{ bhp out}} \times \frac{453.6 \text{ g}}{\text{lb}} = 0.0094 \frac{\text{g} - \text{SO}_x}{\text{bhp} - \text{hr}}$$

**PM₁₀ value includes both filterable (7.71x10⁻⁵ lb/MMBtu) and condensable (9.91x10⁻³ lb/MMBtu) emissions.

PM₁₀ EF converted from lb/MMBtu to equivalent g/bhp-hr as below:

$$0.00999 \frac{\text{lb} - \text{PM}_{10}}{\text{MMBtu}} \times \frac{1 \text{ MMBtu}}{1,000,000 \text{ Btu}} \times \frac{2,542.5 \text{ Btu}}{\text{bhp} - \text{hr input}} \times \frac{1 \text{ bhp input}}{0.35 \text{ bhp out}} \times \frac{453.6 \text{ g}}{\text{lb}} = 0.033 \frac{\text{g} - \text{PM}_{10}}{\text{bhp} - \text{hr}}$$

C. Calculations

1. Pre-Project Potential to Emit (PE1)

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

2. Post-Project Potential to Emit (PE2)

The daily and annual PE2 for each engine C-535-59-0, '-60-0, and '-61-0 are calculated as follows:

Daily PE2					
Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Daily Hours of Operation (hrs/day)	Conversion (g/lb)	PE2 Total (lb/day)
NO _x	0.5	3,629	24	453.6	96.0
SO _x	0.0094	3,629	24	453.6	1.8
PM ₁₀	0.033	3,629	24	453.6	6.3
CO	1.31	3,629	24	453.6	251.5
VOC	0.36	3,629	24	453.6	69.1

Annual PE2					
Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Annual Hours of Operation (hrs/yr)	Conversion (g/lb)	PE2 Total (lb/yr)
NO _x	0.5	3,629	45	453.6	180
SO _x	0.0094	3,629	45	453.6	3
PM ₁₀	0.033	3,629	45	453.6	12
CO	1.31	3,629	45	453.6	472
VOC	0.36	3,629	45	453.6	130

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, including all ERCs held as certificates and all emission reduction credits sold or transferred.

The SSPE1 can be calculated by adding the PE1 from all units with valid ATCs or PTOs and the sum of the ERCs that have been banked at the source and which have not been used on-site (Total_{ERC}).

$$SSPE1_{Total} = SSPE1_{Permit Unit} + Total_{ERC}$$

The PE values for the units that are not calculated in Section VII.C.1 above are based on the PE calculations in Appendix D.

SSPE1 (lb/year)					
Permit Unit/ERC	NO _x	SO _x	PM ₁₀	CO	VOC
ATC C-535-9-19	109	111	27	526	5
C-535-10-4	1,088	1	22	220	11
C-535-13-8	0	0	0	0	2,902
C-535-17-4	113	0	4	30	6
C-535-26-7	3,921	12,482	1,046	13,070	5,489
ATC C-535-44-2 Transportable	1,099	2	0	26	56
C-535-48-1	0	0	14	0	510
C-535-49-1	71	0	3	20	4
ATC C-535-50-0	26,056	40,394	9,868	39,473	1,776
ATC C-535-51-0		40,394	9,868	39,473	1,776
C-535-53-1	71	0	3	20	4
C-535-54-0	157	0	7	119	8
C-535-56-2 Transportable	23	0	1	6	1
C-535-57-2 Transportable	23	0	1	6	1
C-535-58-1 Transportable	197	5	9	9	9
SSPE1 _{Permit Unit}	32,928	93,389	20,873	92,998	12,558
ERC C-1211-1	-	-	-	-	22
ERC C-1211-2	260	-	-	-	-
ERC C-1211-3	-	-	-	56	-
ERC C-1211-4	-	-	18	-	-
Total _{ERC}	260	0	18	56	22
SSPE1	33,188	93,389	20,891	93,054	12,580

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, except for emissions units proposed to be shut down as part of a Stationary Source Project, 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, including all ERCs held as certificates and all emission reduction credits sold or transferred.

The SSPE2 can be calculated by adding the PE2 from all units with valid ATCs or PTOs and the sum of the ERCs that have been banked at the source and which have not been used on-site (Total_{ERC}).

$$\text{SSPE2}_{\text{Total}} = \text{SSPE2}_{\text{Permit Unit}} + \text{Total}_{\text{ERC}}$$

SSPE2 (lb/year)					
Permit Unit/ERC	NO _x	SO _x	PM ₁₀	CO	VOC
ATC C-535-9-19	109	111	27	526	5
C-535-10-4	1,088	1	22	220	11
C-535-13-8	0	0	0	0	2,902
C-535-17-4	113	0	4	30	6
C-535-26-7	3,921	12,482	1,046	13,070	5,489
ATC C-535-44-2 Transportable	1,099	2	0	26	56
C-535-48-1	0	0	14	0	510
C-535-49-1	71	0	3	20	4
ATC C-535-50-0	26,056	40,394	9,868	39,473	1,776
ATC C-535-51-0		40,394	9,868	39,473	1,776
C-535-53-1	71	0	3	20	4
C-535-54-0	157	0	7	119	8
C-535-56-2 Transportable	23	0	1	6	1
C-535-57-2 Transportable	23	0	1	6	1
C-535-58-1 Transportable	197	5	9	9	9
C-535-59-0	180	3	12	472	130
C-535-60-0	180	3	12	472	130
C-535-61-0	180	3	12	472	130
SSPE2 _{Permit Unit}	33,468	93,398	20,909	94,414	12,948
ERC C-1211-1	-	-	-	-	22
ERC C-1211-2	260	-	-	-	-
ERC C-1211-3	-	-	-	56	-
ERC C-1211-4	-	-	18	-	-
Total _{ERC}	260	0	18	56	22
SSPE2	33,728	93,398	20,927	94,470	12,970

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), pursuant to the Clean Air Act, Title 3, Section 302, US Codes 7602(j) and (z)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

SSPE1 Rule 2201 Major Source Determination (lb/year)						
Permit Unit	NOx	SOx	PM10	PM2.5	CO	VOC
ATC C-535-9-19	109	111	27	27	526	5
C-535-10-4	1,088	1	22	22	220	11
C-535-13-8	0	0	0	0	0	2,902
C-535-17-4	113	0	4	4	30	6
C-535-26-7	3,921	12,482	1,046	1,046	13,070	5,489
C-535-48-1	0	0	14	14	0	510
C-535-49-1	71	0	3	3	20	4
ATC C-535-50-0	26,056	40,394	9,868	9,868	39,473	1,776
ATC C-535-51-0		40,394	9,868	9,868	39,473	1,776
C-535-53-1	71	0	3	3	20	4
C-535-54-0	157	0	7	7	119	8
SSPE1	31,586	93,382	20,862	20,862	92,951	12,491
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	No	No

Note: PM2.5 assumed to be equal to PM10

As seen in the table above, the facility is an existing Major Source only for NOx and is not becoming a Major Source for any other pollutant.

SSPE2 Rule 2201 Major Source Determination (lb/year)						
Permit Unit	NOx	SOx	PM10	PM2.5	CO	VOC
ATC C-535-9-19	109	111	27	27	526	5
C-535-10-4	1,088	1	22	22	220	11
C-535-13-8	0	0	0	0	0	2,902
C-535-17-4	113	0	4	4	30	6
C-535-26-7	3,921	12,482	1,046	1,046	13,070	5,489
C-535-48-1	0	0	14	14	0	510
C-535-49-1	71	0	3	3	20	4
ATC C-535-50-0	26,056	40,394	9,868	9,868	39,473	1,776
ATC C-535-51-0		40,394	9,868	9,868	39,473	1,776
C-535-53-1	71	0	3	3	20	4
C-535-54-0	157	0	7	7	119	8
C-535-59-0	180	3	12	12	472	130
C-535-60-0	180	3	12	12	472	130
C-535-61-0	180	3	12	12	472	130
SSPE2	32,126	93,391	20,898	20,898	94,367	12,881
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	No	No

Note: PM2.5 assumed to be equal to PM10

This source is an existing Major Source for NOx emissions and will remain a Major Source for NOx.

Rule 2410 (Prevention of Significant Deterioration) Major Source Determination:

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

PSD Major Source Determination (tons/year)						
	NO₂	VOC	SO₂	CO	PM*	PM10
Estimated Facility PE before Project Increase	15.8	6.3	46.7	47.0	10.4	10.4
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source?	No	No	No	No	No	No

*PM assumed to be equal to PM10.

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 Quarterly Net Emissions Change (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.

C-535-59-0, '-60-0, '-61-0:

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

7. Senate Bill 288 Major Modification

A Senate Bill (SB) 288 Major Modification is a federal major modification under 40 CFR 51.165 as it existed on December 19, 2002. 40 CFR Part 51.165 (12/19/02) defines a Major Modification as any physical change in or change in the method of operation of *an existing major stationary source* that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.

Per section VII.C.5 above, this facility is a major source for NO_x. Thus, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if further SB 288 Major Modification calculation is required.

Non-road engines shall not be considered in determining whether a project is an SB 288 Major Modification. The Federal CAA reserves the regulation of non-road engines to Title II (National Emission Standards) of the CAA.

As calculated in Section VII above:

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NOx	540	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification and no further discussion is required.

8. Federal Major Modification / New Major Source

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.

As defined in 40 CFR 51.165, Section (a)(1)(v) and part D of Title I of the CAA, a Federal Major Modification is 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. The significant net emission increase threshold for each criteria pollutant is included in Rule 2201.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. In step 1, emission decreases cannot cancel out the increases. Step 2 allows consideration of the project’s net emissions increase as described in 40 CFR 51.165 and the Federal Clean Air Act Section 182 (e), as applicable.

Step 1: Project Emissions Increase

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

Emission Increase = PE2

Per District Policy APR 1150 (Implementation of Rule 2201 for SB 288 Major Modifications and Federal Major Modifications), for purposes of determining if a new or modified emission unit is part of a Federal Major Modification, if the annual emission increase for the emission unit when divided by 365 is less than or equal to 0.5 lb/day, such an increase shall be rounded to 0. The sum of the emission increases from new or modified emission units involved in this project that round to 0 shall not constitute a Federal Major Modification.

The total project annual emissions increase for each emissions unit calculated in the table above when divided by 365 is:

$$180 \text{ lb-NOx/year} \div 365 \text{ days/year} = 0.49 \text{ lb-NOx/day.}$$

Therefore, as discussed above, according to District Policy APR 1150, total project annual emission increase is rounded to 0 for NOx.

In conclusion, the project's combined total emission increases are calculated above and summarized in the following table and are compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/year)	Thresholds (lb/year)	Federal Major Modification?
NOx*	0	0	No

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

Since none of the Federal Major Modification Thresholds are being surpassed with this project, this project does not constitute a Federal Major Modification and step 2 is not required and no further discussion is required.

New Major Source

As demonstrated above, this facility is not becoming a Major Source as a result of this project, therefore, this facility is not a New Major Source pursuant to Section 3.30 of District Rule 2201.

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)(A). 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	0.3	0.2	0	0.7	0	0
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	No	No	No	No	No	No

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 complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix E.

VIII. Compliance Determination**Rule 1081 Source Sampling**

The purpose of this rule is to ensure that any source operation which emits or may emit air contaminants provides adequate and safe facilities for use in sampling to determine compliance. This rule also specifies methods and procedures for source testing, sample collection, and compliance determination.

The provisions of this rule shall apply to any source operation which emits or may emit air contaminants.

Pursuant to Section 4.0, the owner of such a source operation, when requested by the APCO, shall provide records or other information which will enable the APCO to determine when a representative sample can be taken. In addition, upon the request of the APCO and as directed by him, the owner of such a source operation shall collect, have collected, or allow the APCO to collect, a source sample.

Therefore, the following condition will be included on the permits:

- The percent load, engine output, and stack gas volumetric flow rate shall be used to convert engine emissions to a mass basis (g/bhp-hr). [District Rules 1081 and 2201]

Pursuant to Section 5.0, the applicable test method if not specified in the rule, shall be conducted in accordance with Title 40 CFR Subpart 60 Appendix A - Reference Methods, except PM10 for compliance with Rule 2201 (New and Modified Stationary Source Review) requirements shall be conducted in accordance with Title 40 CFR Subpart 51, Appendix M, Method 201 or 201A. Where no test method exists in the preceding references for a source type, source sampling shall be conducted in accordance with CARB approved methods. The following condition is included on the permits:

- The following methods shall be used for source testing: NO_x (ppmv) - EPA Method 7E; CO (ppmv) - EPA Method 10; VOC (ppmv) - EPA Method 18, or 25A or 25B; stack gas oxygen - EPA Method 3 or 3A; stack gas velocity/volumetric flowrate - EPA Method 2 or EPA Method 19; stack gas moisture content - EPA Method 4. Alternative test methods as approved by EPA and the District may be used to address the source testing requirements of this permit. [District Rules 1081 and 2201]

Pursuant to Section 7, a facility must meet administrative requirements.

7.1 The District must be notified 30 days prior to any compliance source testing and the owner shall submit a source test plan for District approval 15 days prior to source sampling.

7.2 Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel

7.3 Source test reports must be submitted to the District within 60 days of completion of field testing. Source tests must be submitted for all District authorized compliance source tests regardless of pass, fail or reschedule because of failure, status. A District authorized compliance source test shall not be discontinued solely due to the failure of one (1) or more runs to meet applicable standards

Therefore, the following condition will be included on the permits:

- 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]
- Source testing to measure NO_x, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 1081 and 2201, and 40 CFR 60.4243]

- Source testing to measure NO_x, CO, and VOC emissions from this unit shall be conducted at least once every 8,760 hours of operation or 36 months, whichever comes first. [District Rules 1081 and 2201, and 40 CFR 60.4243]
- The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [Rule District Rule 1081 and 40 CFR 60.4245]

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*:

- Any new emissions unit with a potential to emit exceeding 2.0 pounds per day, or the relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding 2.0 pounds per day,
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding 2.0 pounds per day, and/or
- 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 or relocated emissions units – PE > 2.0 lb/day

As seen in Section VII.C.2 above, the applicant is proposing to install three new natural gas-fired IC engines.

Typical emissions for units C-535-59-0, '-60-0, '-61-0:

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO _x	96.0	> 2.0	n/a	Yes
SO _x	1.8	> 2.0	n/a	No
PM ₁₀	6.3	> 2.0	n/a	Yes
CO	251.5	> 2.0 and SSPE2 ≥ 200,000 lb/yr	94,470	No
VOC	69.1	> 2.0	n/a	Yes

b. Modification of emissions units – AIPE > 2.0 lb/day

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

c. 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

BACT Guideline 3.1.5, which appears in Appendix B of this report, covers gas-fired emergency IC engines.

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 (see Appendix B), BACT has been satisfied with the following:

NO_x: NO_x emissions of ≤ 0.5 g/hp-hr (lean-burn natural gas-fired engine)
VOC: VOC emissions of ≤ 1.0 g/hp-hr (lean-burn natural gas-fired engine)
PM₁₀: Natural gas as fuel

Therefore, the following conditions will be listed on the ATC to ensure compliance:

- {edited 3501} Emissions from this IC engine shall not exceed any of the following limits: 0.5 g-NO_x/bhp-hr, 0.033 g-PM₁₀/bhp-hr, 1.31 g-CO/bhp-hr, or 0.36 g-VOC/bhp-hr. [District Rules 2201 and 4102, and 40 CFR 60.4233]
- {3491} This IC engine shall be fired on Public Utility Commission (PUC) regulated natural gas only. [District Rules 2201 and 4801]

B. Offsets**1. District Emission Offset Requirements****a. District Offset Applicability**

Pursuant to District Rule 2201, Section 4.5, District 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 District Rule 2201.

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

District Offset Determination (lb/year)					
	NOx	SOx	PM10	CO	VOC
SSPE2	33,728	93,398	20,927	94,470	12,970
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets Triggered?	Yes	Yes	No	No	No

b. District Offset Quantity (DOQ) Required

As demonstrated above, District offsets are triggered for NOx, and SOx, under District Rule 2201. However, since this project only involves emergency IC Engines, the District offset exemption from Section 4.6.2 of District Rule 2201 is applicable to this project. Therefore, District offsets are not required for this project and District offset calculations are not necessary.

2. Federal Emission Offset Requirements

a. Federal Offset Applicability

Pursuant to District Rule 2201, Section 4.8, federal offset requirements shall be triggered on a pollutant-by-pollutant basis and shall be required if the project is a New Major Source or a Federal Major Modification.

As demonstrated in section VII.C.8 above, this project is not a New Major Source or a Federal Major Modification for any pollutant addressed in this project. Thus, federal offsets are not triggered for this project.

b. Federal Offset Quantity (FOQ) Required

As discussed above, this project does not trigger Federal Major Modification or New Major Source requirements; therefore, in conclusion, federal offsets will not be required for this project and no further discussion is required.

C. Public Notification

1. Applicability

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

- New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- Any project which results in the offset thresholds being surpassed,

- d. Any project with an SSPE of greater than 20,000 lb/year for any pollutant,
- e. Any project at a minor source which results in an SSPE exceeding 80% of the major source threshold for any pollutant, and/or
- f. Any project which results in a Title V significant permit modification

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

As demonstrated in Sections VII.C.7 and VII.C.8, this project does not trigger an SB 288 or a Federal Major Modification and the facility is not a New Major Source. Therefore, public noticing for this project for New Major Source, Federal Major Modification, or SB 288 Major Modification purposes is not required.

b. PE > 100 lb/day

The PE2 for each new unit C-535-59-0, '-60-0, and '-61-0 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?
NOx	96.0	100 lb/day	No
SOx	1.8	100 lb/day	No
PM10	6.3	100 lb/day	No
CO	251.5	100 lb/day	Yes
VOC	69.1	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 (lb/year)					
	NOx	SOx	PM10	CO	VOC
SSPE1	33,188	93,389	20,891	93,054	12,580
SSPE2	33,728	93,398	20,927	94,470	12,970
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Public Notice Required?	No	No	No	No	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 under Rule 2201. According to District Rule 2201, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds (lb/year)					
	NOx	SOx	PM10	CO	VOC
SSPE2	33,728	93,398	20,927	94,470	12,970
SSPE1	33,188	93,389	20,891	93,054	12,580
SSIPE	540	9	36	1,416	390
SSIPE Public Notice Threshold	20,000	20,000	20,000	20,000	20,000
Public Notice Required?	No	No	No	No	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. Minor Sources with SSPE Exceeding 80% of Major Source Threshold

Public notification is required for any project for new and/or modified stationary sources at minor source facilities that results in a SSPE exceeding 80% of the major source threshold.

As shown in Section VII.C.5 above, the facility is not a Major Source for SOx, PM10, CO, and VOC. The following table compares the SSPE1 with the SSPE2 in order to determine if 80% of any major source thresholds for SOx, PM10, CO, and VOC have been surpassed with this project. Pursuant to Section 5.4.6 of District Rule 2201, the increase in stationary source potential to emit should be consistent with Sections 3.28.1, 3.28.2, and 3.28.3 of Rule 2201. Section 3.28.1 omits fugitive emissions from

the SSPE unless the source is included in one of the source categories listed in 40 CFR 51.165(a)(1)(iv)(C). Section 3.28.2 omits ERCs which have been banked since September 19, 1991 for actual emission reductions that have occurred at the source, but have not been used on-site. Finally Section 3.28.3 omits emissions resulting directly from nonroad engines as defined in Section 216 of Part A of the Clean Air Act.

80% of Major Source Thresholds (lb/year)					
	NOx	SOx	PM10	CO	VOC
SSPE1	31,586	93,382	20,862	92,951	12,491
SSPE2	32,126	93,391	20,898	94,367	12,881
80% of Major Source Threshold	16,000	112,000	112,000	160,000	16,000
Public Notice Required?	No	No	No	No	No

As demonstrated above, the SSPE2 did not surpass 80% of the major source threshold for any pollutant emitted by this project; therefore, public noticing for this purpose is not required.

f. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project does not constitute a Title V significant modification. Therefore, public noticing for Title V significant modifications is not required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project for CO emissions in excess of 100.0 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.

For this IC engine, the DELs are stated in the form of emission factors (g/hp-hr), the maximum engine horsepower rating, and the maximum operational time of 24 hours per day.

Proposed Rule 2201 (DEL) Conditions:

- {3501 modified} Emissions from this IC engine shall not exceed any of the following limits: 0.5 g-NO_x/bhp-hr, 0.033 g-PM₁₀/bhp-hr, 1.31 g-CO/bhp-hr, or 0.36 g-VOC/bhp-hr. [District Rules 2201 and 4102, and 40 CFR 60.4233]
- {3491} This IC engine shall be fired on Public Utility Commission (PUC) regulated natural gas only. [District Rules 2201 and 4801]
- The percent load, engine output, and stack gas volumetric flow rate shall be used to convert engine emissions to a mass basis (g/bhp-hr). [District Rules 1081 and 2201]

E. Compliance Assurance

1. Source Testing

The proposed 3,629 bhp natural gas-fired engines are also subject to 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. 40 CFR 60, Subpart JJJJ requires that a performance test be conducted for uncertified engines rated 500 bhp or more every 8,760 hours of operation or every 3 years, whatever comes first. The periodic source testing required by 40 CFR 60, Subpart JJJJ will ensure compliance with the applicable New Source Review (NSR) requirements NO_x, CO, and VOC. Therefore, source testing for NO_x, CO, and VOC will be required within 60 days of initial start-up and at least once every 8,760 hours of operation or 36 months thereafter, whichever comes first.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification, and daily emission limit requirements of Rule 2201. As required by District Rule 4702, *Stationary Internal Combustion Engines*, these IC engines are subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rule 4702, will be discussed in Section VIII, *District Rule 4702*, of this evaluation.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

As stated above, the proposed 3,629 bhp engine is subject to 40 CFR 60, Subpart JJJJ. 40 CFR 60, Subpart JJJJ requires uncertified engines rated 500 bhp or more to submit an initial notification to EPA. 40 CFR 60, Subpart JJJJ requires the operator or owner of the engines to report source test results within 60 days of the completion of testing. Therefore, the following conditions will be included on the permit:

- The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [District Rule 1081 and 40 CFR 60.4245]

- Notification of the date construction of this engine commenced shall be submitted to the District and EPA and shall be postmarked no later than 30 days after such date as construction commenced. The notification shall contain the following information: 1) Name and address of the owner or operator; 2) The address of the affected source; 3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; 4) Emission control equipment; and 5) Fuel used. Notification of construction and copies of source test results shall be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). [40 CFR 60.4245]

F. Ambient Air Quality Analysis (AAQA)

Section 4.15 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 evaluated the proposed project's potential impact on the National Ambient Air Quality Standard (NAAQS) and/or California Ambient Air Quality Standard (CAAQS) in accordance with [District Policy APR 1925 \(District Rule 2201 AAQA Modeling\)](#) and EPA's Guideline for Air Quality Modeling (Appendix W of 40 CFR Part 51).

Based on the results of the AAQA, the project is not expected to cause or contribute to an exceedance of any applicable NAAQS or CAAQS, nor does it exceed applicable Significant Impact Levels (SILs). See AAQA Summary attached in Appendix G to this application review for further detail.

Rule 2410 Prevention of Significant Deterioration

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

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, Minor Permit Modifications are permit modifications that:

1. Do not violate requirements of any applicable federally enforceable local or federal regulations;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to

avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:

- a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act, prevention of significant deterioration (PSD) provisions of the CAA, or EPA PSD regulations; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Federal Major Modifications as defined in this rule, modifications as defined in section 111 or 112 of the Federal Clean Air Act¹, or major modifications under the prevention of significant deterioration (PSD) provisions of Title I of the CAA or under EPA PSD regulations; and
 6. Do not seek to consolidate overlapping applicable requirements.

Additionally, Section 11.4 requires a description of the proposed change, the emissions resulting from the change, any new applicable requirements that will apply if the change occurs, suggested draft permits, compliance certification and an EPA 45-day review period of the proposed permit modification (or a shorter period if EPA has notified the District that EPA will not object to issuance of the permit modification, whichever is first).

As discussed above, the facility has applied for a Certificate of Conformity (COC) and the District will forward to EPA, for a 45-day review period, this application review which includes the proposed modified Title V permit [i.e. proposed ATC(s)] and the compliance certification form which demonstrates compliance with the minor permit modification requirements in Section 11.4. Therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application. Therefore, the following conditions will be included on the ATC(s):

- {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201]
- {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4]

Rule 4001 New Source Performance Standards (NSPS)

New Source Performance Standards (NSPS) (Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR)) are federal air pollution control standards authorized by Section 111 of the Clean Air Act and promulgated by US EPA. By default, US EPA retains authority to administer

¹ The engines in this project are *new*, not *modifications*, under NSPS Subpart JJJJ. In keeping with Clean Air Act section 111 and the general framework for NSPS Subpart A, Subpart JJJJ makes a distinction between *new* units, i.e. units that commenced construction after June 12, 2006 (40 CFR 60.4230(a)(6)) and *modified* units (40 CFR 60.4230(a)(5)).

and enforce NSPS unless US EPA delegates this authority to a state or local agency. District Rule 4001 incorporates those NSPS that US EPA has delegated to the District. In addition, for sources with Title V permits, the District acts as the administrator for all NSPS, regardless of the delegation status of the specific NSPS in Rule 4001.

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.

The following section analyzes the applicable requirements from 40 CFR 60 Subpart JJJJ.

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 bhp (except lean burn engines with a maximum engine power greater than or equal to 500 bhp and less than 1,350 bhp); (b) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 bhp and less than 1,350 bhp; (c) on or after July 1, 2008, for engines with a maximum engine power less than 500 bhp; or (d) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 kW (25 bhp).

The proposed emergency engines are 3,629 bhp natural gas-fired lean-burn SI engines that will be constructed after June 12, 2006 and manufactured after January 1, 2009; therefore, the proposed engine is subject to this subpart.

Emission Standards

Sections 60.4233(a) through (c) specify the emission standards for IC engines less than or equal to 25 bhp, or to IC engines that use gasoline or LPG as a fuel. These sections do not apply to the engines in this project.

Pursuant to Section 60.4233(d), owners and operators of stationary SI ICE with a maximum engine power greater than 19 kW (25 bhp) and less than 75 kW (100 bhp) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c) for their non-emergency stationary SI ICE and with the emission standards in 40 CFR 60, Subpart JJJJ, Table 1 for their emergency stationary SI ICE. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 kW (25 bhp) and less than 75 kW (100 bhp) manufactured prior to January 1, 2011, that were certified to the standards in 40 CFR 60, Subpart JJJJ, Table 1 applicable to engines with a maximum engine power greater than or equal to 100 bhp and less than 500 bhp, may optionally choose to meet those standards.

The proposed IC engines have a power rating greater than 100 bhp (75 kW); therefore, this section is not applicable.

Pursuant to Section 60.4233(e), owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 kW (100 bhp) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in 40 CFR 60, Subpart JJJJ, Table 1 for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 bhp (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in 40 CFR 60, Subpart JJJJ, Table 1, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

The proposed engines are 3,629 bhp, natural gas-fired, lean-burn SI emergency IC engines that are not certified and will be constructed after June 12, 2006. Therefore, they are subject to the emission standards in Table 1 of this subpart.

The requirements contained in 40 CFR 60, Subpart JJJJ, Table 1 for spark-ignited engines subject to 40 CFR 60, Subpart JJJJ are summarized in the table below:

Table 1 to Subpart JJJJ of Part 60 - NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP								
Engine Type and Fuel	Maximum Engine Power	Manufacture Date	Emission Standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Non-Emergency SI Natural Gas ^b and Non-Emergency SI Lean Burn LPG ^b	100 ≤ bhp < 500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG	500 ≤ bhp < 1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	bhp ≥ 500	7/1/2007	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500 ≥ bhp <1,350)	bhp < 500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
	bhp ≥ 500	7/1/2007	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Landfill/Digester Gas Lean Burn	500 ≤ bhp < 1,350	1/1/2008	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25 < bhp < 130	1/1/2009	^c 10	387	N/A	N/A	N/A	N/A
	bhp ≥ 130		2.0	4.0	1.0	160	540	86

^a Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/hp-hr or ppmvd at 15 percent O₂.

^b Owners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake hp located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2a do not have to comply with the CO emission standards of Table 1 of this subpart.

^c The emission standards applicable to emergency engines between 25 hp and 130 hp are in terms of NO_x + HC.

^d VOC emission concentrations reported as propane; For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

The emission limits for the proposed emergency IC engines will satisfy the applicable Emergency standards of Table 1 of 40 CFR 60, Subpart JJJJ and the following previously proposed condition will be included on the ATC permit:

- {edited 3501} Emissions from this IC engine shall not exceed any of the following limits: 0.5 g-NOx/bhp-hr, 0.033 g-PM10/bhp-hr, 1.31 g-CO/bhp-hr, or 0.36 g-VOC/bhp-hr. [District Rules 2201 and 4102, and 40 CFR 60.4233]

Pursuant to Section 60.4234, an owner or operator of a stationary SI internal combustion engine must operate and maintain the engines such that they achieve the emission standards as required in 40 CFR 60.4233 over the entire life of the engine.

The ATC permit for the proposed engines require periodic emissions testing over the life of these engines to ensure that the applicable emission limits contained in the permit are met. Therefore, the requirements of this section will be satisfied.

Monitoring Requirements for Emergency Engines

Section 60.4237(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

The engines in this project will have enforceable emission limits that do meet the non-emergency emission standards from Table 1; therefore, the engines are not subject to the non-resettable hour meter requirement of this section. (Nevertheless, Rule 4702 requires a non-resettable hour meter.)

Compliance Requirements for Owners and Operators

Pursuant to Section 60.4243(b), an owner or operator of a non-certified stationary SI internal combustion engine rated greater than 500 bhp must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, an initial performance test must be conducted and subsequent performance testing must be conducted every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

The operator of the proposed engine is also required to maintain records of maintenance and periodically source test to demonstrate compliance with District Rule 4702; therefore, the following conditions will be included on the ATC permit for the engine:

- All equipment shall be maintained in good operating condition and shall be operated in a manner consistent with good air pollution control practice to minimize emissions of air contaminants. [District Rule 2201 and 40 CFR 60.4243]

- {109 modified} 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]
- Source testing to measure NO_x, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 1081 and 2201, and 40 CFR 60.4243]
- Source testing to measure NO_x, CO, and VOC emissions from this unit shall be conducted at least once every 8,760 hours of operation or 36 months, whichever comes first. [District Rules 1081 and 2201, and 40 CFR 60.4243]
- The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: the total hours of operation, the type and quantity of each fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 2201, 4701, and 4702, and 40 CFR 60.4243 and 40 CFR 60.4245]

Section 60.4243(g) states, "It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times." Pursuant to the April 24, 2008 letter from the US EPA Office of Compliance to Jonathon Pettit of the Idaho Department of Environmental Quality, "The provisions of 40 CFR Part 60, Section 60.4243(g) are not intended to apply to lean burn engines."² The proposed engine is a lean burn engine; therefore, this section does not apply.

Section 60.4244 requires that three separate test runs be conducted for each performance test and that each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour. The following condition will be included on the ATC permit for the engine:

- For emissions source testing, the arithmetic average of three 60-consecutive-minute test runs shall apply. Each test run shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. NO_x, CO, and VOC emission concentrations shall be converted over to mass basis (g/bhp-hr) for demonstrating compliance with the limits specified in this permit. [40 CFR 60.4244]

Section 60.4245(a) requires owners and operators of stationary SI ICEs to maintain the following records:

- 1) All notifications submitted to comply with 40 CFR 60, Subpart JJJJ and all documentation supporting any notification;

² See EPA RICE NESHAAP and ICE NSPS Applicability Determinations:

https://www.epa.gov/sites/default/files/2016-11/documents/rice_neshap_nsps_applicability_determinations.pdf

- 2) For certified engines, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable;
- 3) For engines that are not certified engine or certified engines operating in a non-certified manner and subject to Section 60.4243(a)(2), documentation that the engine meets the applicable emission standards

The following previously proposed condition will be included on the ATC permit for the engines:

- All records shall be maintained and retained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201 and 4702 and 40 CFR 60.4245]

Section 60.4245(c) requires owners and operators of stationary SI ICE greater than or equal to 500 bhp that have not been certified by an engine manufacturer to meet the emission standards in Section 60.4231 to submit an initial notification as required in Section 60.7(a)(1). The notification must include the following:

- 1) Name and address of the owner or operator;
- 2) The address of the affected source;
- 3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
- 4) Emission control equipment; and
- 5) Fuel used

The following condition will be included on the ATC permit for the engine:

- Notification of the date construction of this engine commenced shall be submitted to the District and EPA and shall be postmarked no later than 30 days after such date as construction commenced. The notification shall contain the following information: 1) Name and address of the owner or operator; 2) The address of the affected source; 3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; 4) Emission control equipment; and 5) Fuel used. Notification of construction and copies of source test results shall be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). [40 CFR 60.4245]

Section 60.4245(d) requires owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.

The following previously proposed condition will be included on the ATC permit for the IC engine:

- The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [District Rule 1081 and 40 CFR 60.4245]

Table 2 of 40 CFR 60, Subpart JJJJ specifies methods and procedures for performance testing to demonstrate compliance with the applicable emission limits. The following previously proposed condition will be included on the ATC permit for the engine:

- The following methods shall be used for source testing: NO_x (ppmv) - EPA Method 7E; CO (ppmv) - EPA Method 10; VOC (ppmv) - EPA Method 18, or 25A or 25B; stack gas oxygen - EPA Method 3 or 3A; stack gas velocity/volumetric flowrate - EPA Method 2 or EPA Method 19; stack gas moisture content. Alternative test methods as approved by EPA and the District may be used to address the source testing requirements of this permit. [District Rules 1081 and 2201]

Conclusion

The applicable requirements of 40 CFR 60, Subpart JJJJ will be incorporated into the conditions of the ATC permit for the IC engines and compliance with the applicable requirements of 40 CFR 60, Subpart JJJJ is expected.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) (Part 61 and Part 63, Chapter 1, Subchapter C, Title 40, Code of Federal Regulations (CFR)) are federal standards for the control of hazardous air pollutants (HAP) authorized by Section 112 of the Clean Air Act and promulgated by US EPA. By default, US EPA retains authority to administer and enforce NESHAP unless US EPA delegates this authority to a state or local agency. District Rule 4002 incorporates those NESHAP that US EPA has delegated to the District. In addition, for sources with Title V permits, the District acts as the administrator for all NESHAP, regardless of the delegation status of the specific NESHAP in Rule 4002.

The Facility C-535 HAP Potential to Emit Report in Appendix H lists combined HAPs as 7.28 ton/year; therefore, the facility is an area source of HAPs.

40 CFR 63, Subpart VVV National Emission Standards for Hazardous Air Pollutants for Publicly Owned Treatment Works (POTW)

Applicability

A POTW is subject to this subpart if *all three* of the following apply:

- (1) The POTW includes an affected source as defined in §63.1595.
- (2) The affected source is located at a Group 2 POTW which is a major source of HAP emissions, or at any Group 1 POTW regardless of whether or not it is a major source of HAP; and
- (3) The POTW is required to develop and implement a pretreatment program as defined by [40 CFR 403.8](#), or your POTW meets the general criteria for development and implementation of a pretreatment program.

Subpart VVV defines a Group 1 POTW as a POTW that accepts waste stream regulated by another NESHAP and provides the treatment and controls as an agent for the industrial user discharging the waste, i.e. the industrial user relies on the POTW as part of compliance with the NESHAP. A Group 2 POTW is any POTW.

Since Fresno/Clovis WWTP is an area source of HAPs and does not receive waste from an industrial facility that relies on Fresno/Clovis WWTP to meet the requirements of a NESHAP, Fresno/Clovis WWTP is neither a Group 1 POTW nor a Group 2 POTW that is a major source HAPs; therefore, Subpart VVV is not applicable to Fresno/Clovis WWTP, and no further discussion of this subpart is required.

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

The requirements of 40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Internal Combustion Engines are applicable to stationary reciprocating internal combustion engines (RICE) located at major and area sources of hazardous air pollutant (HAP) emissions. The requirements of 40 CFR 63, Subpart ZZZZ are discussed below.

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 shown above, the proposed spark-ignited engines will comply with 40 CFR 60, Subpart JJJJ; therefore, the engine is expected to comply with 40 CFR 63, Subpart ZZZZ.

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 listed on ATC permits as a mechanism 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 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 these operations, provided the equipment is well maintained. The following condition will be listed on the ATC(s) as a mechanism to ensure compliance:

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

California Health & Safety Code 41700 (General Limitations)

CH&SC Section 41700 states that except as otherwise provided in CH&SC Section 41705, a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.

The District's health Risk Management Review (RMR) program and policies assist with demonstrating compliance with the aforementioned CH&SC requirements. One of the RMR program goals is to minimize the increase that new and modified stationary sources add to the existing toxic load and any potentially significant public health impacts associated with the release of those airborne toxic emissions. In order to achieve this goal, the District performs a Health Risk Assessment (HRA) to evaluate the health risk of any proposed stationary source ATC permitting project with a potential increase in air toxics emissions. Projects that may cause an increase in hourly, daily, or annual potential to emit of air toxics or projects that could increase the public exposure to air toxics undergo this analysis to ensure the possible adverse health risk on nearby residents or businesses, including the cumulative health risk from past projects dating back to the adoption of the program, does not exceed specified significance levels.

The District's risk management policies are [APR 1905 \(Risk Management Policy for Permitting New and Modified Sources\)](#) and [APR 1906 \(Framework for Performing Health Risk Assessments\)](#). Under District policy, significance levels are established for cancer risk (20 lifetime cases per million population) and acute and chronic risks (hazard index not greater than 1.0). The hazard index represents a ratio of the modeled air toxics concentration(s) at the most impacted receptor divided by the reference exposure level (REL), below which no adverse health effects are expected, even for sensitive individuals). The policy also requires Best Available Control Technology for toxics (TBACT) for emission units that have the potential to cause a greater than *de minimis* increase in cancer risk (equal to or greater than 1.0 case per million population).

The potential health risk from the proposed project is below all established significance thresholds; therefore, the project is approvable under District RMR Policies. See Health Risk Assessment Summary attached as Appendix C to this application review for further detail.

The following condition will ensure compliance with the dispersion assumptions made in the RMR:

- {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]

Rule 4201 Particulate Matter Concentration

Particulate matter emissions from the engine will be less than or equal to the rule limit of 0.1 grain per cubic foot of gas at dry standard conditions as shown by the following:

$$0.033 \frac{g - PM_{10}}{bhp - hr} \times \frac{1g - PM}{0.96g - PM_{10}} \times \frac{1bhp - hr}{2,542.5 Btu} \times \frac{10^6 Btu}{8,578 dscf} \times \frac{0.35 Btu_{out}}{1 Btu_{in}} \times \frac{15.43 grain}{g} = 0.009 \frac{grain - PM}{dscf}$$

Since 0.009 grain-PM/dscf is $\leq$ to 0.1 grain per dscf, compliance with Rule 4201 is expected.

Rule 4701 Internal Combustion Engines – Phase 1

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_x), 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.

The proposed 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 for emergency engines, compliance with District Rule 4702 requirements will satisfy requirements of District Rule 4701.

Rule 4702 Internal Combustion Engines

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

This rule applies to any internal combustion engine rated at 25 brake horsepower or greater.

Pursuant to Section 4.2, except for the requirements of Sections 5.10 and 6.2.3, the requirements of this rule shall not apply to an internal combustion engine that meets the following condition:

- 1) An emergency standby engine as defined in Section 3.0 of this rule, and provided that it is operated with a nonresettable elapsed operating time meter. In lieu of a nonresettable time meter, the owner of an emergency engine may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO. The owner of the engine shall properly maintain and operate the time meter or alternative device in accordance with the manufacturer's instructions.

Section 3.15 defines an "Emergency Standby Engine" as an internal combustion engine which operates as a temporary replacement for primary mechanical or electrical power during an unscheduled outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the operator. An engine shall be considered to be an emergency standby engine if it is used only for the following purposes: (1) periodic maintenance, periodic readiness testing, or readiness testing during and after repair work; (2) unscheduled outages, or to supply power while maintenance is performed or repairs are made to the primary power supply; and (3) if it is limited to operate 100 hours or less per calendar year for non-emergency purposes. An engine shall not be considered to be an

emergency standby engine if it is used: (1) to reduce the demand for electrical power when normal electrical power line service has not failed, or (2) to produce power for the utility electrical distribution system, or (3) in conjunction with a voluntary utility demand reduction program or interruptible power contract.

Therefore, the emergency standby IC engines involved with this project will only have to meet the requirements of Sections 5.10 and 6.2.3 of this Rule.

Section 5.10 of this Rule requires that the owner of an emergency standby engine shall comply with the requirements specified in Section 5.10.2 through Section 5.10.4 below:

- 1) Properly operate and maintain each engine as recommended by the engine manufacturer or emission control system supplier.
- 2) Monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier.
- 3) Install and operate a nonresettable elapsed operating time meter. In lieu of installing a nonresettable time meter, the owner of an engine 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.

Therefore, the following conditions will be listed on the ATC to ensure compliance:

- {3405} 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]
- {3404} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
- {4985} 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]
- {4986} This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702]

- {3806} 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 45 hours per calendar year. [District Rule 4702]

Section 6.2.3 requires that an owner claiming an exemption under Section 4.2 or Section 4.3 shall maintain annual operating records. This information shall be retained for at least five years, shall be readily available, and submitted to the APCO upon request. Therefore, the following condition (previously proposed in this engineering evaluation) will be listed on the ATC to ensure compliance:

- {4987} 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 Rule 4702]
- {3497} 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 Rule 4702]

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:

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

n = moles SO₂

T (standard temperature) = 60 °F or 520 °R

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

$$2.85 \quad \frac{\text{lb} - S}{\text{MMscf} - \text{gas}} \times \frac{1 \text{ scf} - \text{gas}}{1,000 \text{ Btu}} \times \frac{1 \text{ MMBtu}}{8,578 \text{ scf}} \times \frac{1 \text{ lb} - \text{mol}}{64 \text{ lb} - S} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} - \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times 1,000,000 = 1.97 \quad \text{ppmv}$$

Since 1.97 ppmv is ≤ 2,000 ppmv, this engine is expected to comply with Rule 4801. Therefore, the following condition (previously proposed in this engineering evaluation) will be listed on the ATC to ensure compliance:

- {3491} This IC engine shall be fired on Public Utility Commission (PUC) regulated natural gas only. [District Rules 2201 and 4801]

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 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.

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. Pending a successful NSR

Public Noticing period, issue ATCs C-535-59-0, '-60-0, and '-61-0 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-535-59-0	3020-10-F	3,629 bhp IC engine	\$1,050
C-535-60-0	3020-10-F	3,629 bhp IC engine	\$1,050
C-535-61-0	3020-10-F	3,629 bhp IC engine	\$1,050

XI. Appendices

- A: Draft ATCs
- B: BACT Guideline and BACT Top-Down Analysis
- C: HRA Summary
- D: SSPE1 Calculations
- E: Quarterly Net Emissions Change
- F: Compliance Certification
- G: AAQA Summary
- H: Facility C-535 HAP Potential to Emit Report

APPENDIX A

Draft ATCs

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-535-59-0

LEGAL OWNER OR OPERATOR: FRESNO/CLOVIS REGIONAL WWTP

MAILING ADDRESS: 5607 W JENSEN AVE
FRESNO, CA 93706-9458

LOCATION: 5607 W JENSEN AVE
FRESNO, CA 93706

EQUIPMENT DESCRIPTION:

3,629 BHP (INTERMITTENT) CATERPILLAR MODEL G3520 LEAN-BURN NATURAL GAS-FIRED EMERGENCY
STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. {3404} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]

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

Brian Clements, Director of Permit Services

C-535-59-0 : 9/17/2026 12:58:10 PM -- BUSHT : Joint Inspection NOT Required

7. 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]
Federally Enforceable Through Title V Permit
8. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702] Federally Enforceable Through Title V Permit
9. This IC engine shall be fired on Public Utility Commission (PUC) regulated natural gas only. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
10. Emissions from this IC engine shall not exceed any of the following limits: 0.5 g-NOx/bhp-hr, 0.033 g-PM10/bhp-hr, 1.31 g-CO/bhp-hr, or 0.36 g-VOC/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The percent load, engine output, and stack gas volumetric flow rate shall be used to convert engine emissions to a mass basis (g/bhp-hr). [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
12. {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]
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
14. Source testing to measure NOx, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 1081 and 2201, and 40 CFR 60.4243] Federally Enforceable Through Title V Permit
15. Source testing to measure NOx, CO, and VOC emissions from this unit shall be conducted at least once every 8,760 hours of operation or 36 months, whichever comes first. [District Rules 1081 and 2201, and 40 CFR 60.4243]
Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [Rule District Rule 1081 and 40 CFR 60.4245] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 60-consecutive-minute test runs shall apply. Each test run shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. NOx, CO, and VOC emission concentrations shall be converted over to mass basis (g/bhp-hr) for demonstrating compliance with the limits specified in this permit. [40 CFR 60.4244] Federally Enforceable Through Title V Permit
18. The following methods shall be used for source testing: NOx (ppmv) - EPA Method 7E; CO (ppmv) - EPA Method 10; VOC (ppmv) - EPA Method 18, or 25A or 25B; stack gas oxygen - EPA Method 3 or 3A; stack gas velocity/volumetric flowrate - EPA Method 2 or EPA Method 19; stack gas moisture content - EPA Method 4. Alternative test methods as approved by EPA and the District may be used to address the source testing requirements of this permit. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
19. All equipment shall be maintained in good operating condition and shall be operated in a manner consistent with good air pollution control practice to minimize emissions of air contaminants [District Rule 2201 and 40 CFR 60.4243]
Federally Enforceable Through Title V Permit
20. 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] Federally Enforceable Through Title V Permit
21. 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] Federally Enforceable Through Title V Permit
22. 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 45 hours per calendar year. [District Rule 4702] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Notification of the date construction of this engine commenced shall be submitted to the District and EPA and shall be postmarked no later than 30 days after such date as construction commenced. The notification shall contain the following information: 1) Name and address of the owner or operator; 2) The address of the affected source; 3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; 4) Emission control equipment; and 5) Fuel used. Notification of construction and copies of source test results shall be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). [40 CFR 60.4245] Federally Enforceable Through Title V Permit
24. 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 Rule 4702] Federally Enforceable Through Title V Permit
25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: the total hours of operation, the type and quantity of each fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. Quantity of fuel used shall be recorded in standard cubic feet using a non-resettable, totalizing mass or volumetric fuel flow meter or other APCO approved-device. [District Rules 2201, 4701, and 4702, and 40 CFR 60.4243 and 40 CFR 60.4245] Federally Enforceable Through Title V Permit
26. 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 40 CFR 60.4245] Federally Enforceable Through Title V Permit

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AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-535-60-0

LEGAL OWNER OR OPERATOR: FRESNO/CLOVIS REGIONAL WWTP

MAILING ADDRESS: 5607 W JENSEN AVE
FRESNO, CA 93706-9458

LOCATION: 5607 W JENSEN AVE
FRESNO, CA 93706

EQUIPMENT DESCRIPTION:

3,629 BHP (INTERMITTENT) CATERPILLAR MODEL G3520 LEAN-BURN NATURAL GAS-FIRED EMERGENCY
STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. {3404} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]

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

Brian Clements, Director of Permit Services

C-535-60-0 : 9/17/2026 12:59:31 PM -- BUSHT : Joint Inspection NOT Required

7. 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]
Federally Enforceable Through Title V Permit
8. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702] Federally Enforceable Through Title V Permit
9. This IC engine shall be fired on Public Utility Commission (PUC) regulated natural gas only. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
10. Emissions from this IC engine shall not exceed any of the following limits: 0.5 g-NOx/bhp-hr, 0.033 g-PM10/bhp-hr, 1.31 g-CO/bhp-hr, or 0.36 g-VOC/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The percent load, engine output, and stack gas volumetric flow rate shall be used to convert engine emissions to a mass basis (g/bhp-hr). [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
12. {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]
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
14. Source testing to measure NOx, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 1081 and 2201, and 40 CFR 60.4243] Federally Enforceable Through Title V Permit
15. Source testing to measure NOx, CO, and VOC emissions from this unit shall be conducted at least once every 8,760 hours of operation or 36 months, whichever comes first. [District Rules 1081 and 2201, and 40 CFR 60.4243]
Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [Rule District Rule 1081 and 40 CFR 60.4245] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 60-consecutive-minute test runs shall apply. Each test run shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. NOx, CO, and VOC emission concentrations shall be converted over to mass basis (g/bhp-hr) for demonstrating compliance with the limits specified in this permit. [40 CFR 60.4244] Federally Enforceable Through Title V Permit
18. The following methods shall be used for source testing: NOx (ppmv) - EPA Method 7E; CO (ppmv) - EPA Method 10; VOC (ppmv) - EPA Method 18, or 25A or 25B; stack gas oxygen - EPA Method 3 or 3A; stack gas velocity/volumetric flowrate - EPA Method 2 or EPA Method 19; stack gas moisture content - EPA Method 4. Alternative test methods as approved by EPA and the District may be used to address the source testing requirements of this permit. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
19. All equipment shall be maintained in good operating condition and shall be operated in a manner consistent with good air pollution control practice to minimize emissions of air contaminants [District Rule 2201 and 40 CFR 60.4243]
Federally Enforceable Through Title V Permit
20. 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] Federally Enforceable Through Title V Permit
21. 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] Federally Enforceable Through Title V Permit
22. 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 45 hours per calendar year. [District Rule 4702] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Notification of the date construction of this engine commenced shall be submitted to the District and EPA and shall be postmarked no later than 30 days after such date as construction commenced. The notification shall contain the following information: 1) Name and address of the owner or operator; 2) The address of the affected source; 3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; 4) Emission control equipment; and 5) Fuel used. Notification of construction and copies of source test results shall be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). [40 CFR 60.4245] Federally Enforceable Through Title V Permit
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25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: the total hours of operation, the type and quantity of each fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. Quantity of fuel used shall be recorded in standard cubic feet using a non-resettable, totalizing mass or volumetric fuel flow meter or other APCO approved-device. [District Rules 2201, 4701, and 4702, and 40 CFR 60.4243 and 40 CFR 60.4245] Federally Enforceable Through Title V Permit
26. 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 40 CFR 60.4245] Federally Enforceable Through Title V Permit

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AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-535-61-0

LEGAL OWNER OR OPERATOR: FRESNO/CLOVIS REGIONAL WWTP

MAILING ADDRESS: 5607 W JENSEN AVE
FRESNO, CA 93706-9458

LOCATION: 5607 W JENSEN AVE
FRESNO, CA 93706

EQUIPMENT DESCRIPTION:

3,629 BHP (INTERMITTENT) CATERPILLAR MODEL G3520 LEAN-BURN NATURAL GAS-FIRED EMERGENCY
STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
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6. {3404} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]

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Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services

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7. 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]
Federally Enforceable Through Title V Permit
8. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702] Federally Enforceable Through Title V Permit
9. This IC engine shall be fired on Public Utility Commission (PUC) regulated natural gas only. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
10. Emissions from this IC engine shall not exceed any of the following limits: 0.5 g-NOx/bhp-hr, 0.033 g-PM10/bhp-hr, 1.31 g-CO/bhp-hr, or 0.36 g-VOC/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The percent load, engine output, and stack gas volumetric flow rate shall be used to convert engine emissions to a mass basis (g/bhp-hr). [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
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15. Source testing to measure NOx, CO, and VOC emissions from this unit shall be conducted at least once every 8,760 hours of operation or 36 months, whichever comes first. [District Rules 1081 and 2201, and 40 CFR 60.4243]
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16. The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [Rule District Rule 1081 and 40 CFR 60.4245] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 60-consecutive-minute test runs shall apply. Each test run shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. NOx, CO, and VOC emission concentrations shall be converted over to mass basis (g/bhp-hr) for demonstrating compliance with the limits specified in this permit. [40 CFR 60.4244] Federally Enforceable Through Title V Permit
18. The following methods shall be used for source testing: NOx (ppmv) - EPA Method 7E; CO (ppmv) - EPA Method 10; VOC (ppmv) - EPA Method 18, or 25A or 25B; stack gas oxygen - EPA Method 3 or 3A; stack gas velocity/volumetric flowrate - EPA Method 2 or EPA Method 19; stack gas moisture content - EPA Method 4. Alternative test methods as approved by EPA and the District may be used to address the source testing requirements of this permit. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
19. All equipment shall be maintained in good operating condition and shall be operated in a manner consistent with good air pollution control practice to minimize emissions of air contaminants [District Rule 2201 and 40 CFR 60.4243]
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22. 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 45 hours per calendar year. [District Rule 4702] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Notification of the date construction of this engine commenced shall be submitted to the District and EPA and shall be postmarked no later than 30 days after such date as construction commenced. The notification shall contain the following information: 1) Name and address of the owner or operator; 2) The address of the affected source; 3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; 4) Emission control equipment; and 5) Fuel used. Notification of construction and copies of source test results shall be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). [40 CFR 60.4245] Federally Enforceable Through Title V Permit
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APPENDIX B

BACT Guideline and BACT Top-Down Analysis

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.1.5*

Last Update: 7/16/2018

Emergency Gas-Fired IC Engine

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1) LEAN BURN: 206 ppmv @ 15% O ₂ (1.0 g/bhp-hr) 2) RICH BURN: 60 ppmv @ 15% O ₂ (0.29 g/bhp-hr)		
SO _x	Natural Gas, LPG, or Propane as fuel		
PM ₁₀	Natural Gas, LPG, or Propane as fuel		
NO _x	1) LEAN BURN: < 500 BHP: 1.0 g/bhp-hr ≥ 500 BHP: 0.5 g/bhp-hr 2) RICH BURN: 25 ppmv @ 15% O ₂ (0.44 g/bhp-hr)		
CO	2.0 g/bhp-hr		

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**

Top Down BACT Analysis for the Emergency IC Engine(s)

This application was deemed complete on April 15, 2026. Therefore, BACT Guideline 3.1.5, Emergency Gas-Fired IC Engine (July 16, 2018) was in effect at the time the project was deemed complete and will be used for this emergency lean-burn natural gas-fired IC engine. In accordance with the District BACT policy, information from that guideline will be utilized without further analysis.

1. BACT Analysis for NO_x Emissions:

Oxides of nitrogen (NO_x) are generated from the high temperature combustion of the natural gas fuel. A majority of the NO_x emissions are formed from the high temperature reaction of nitrogen and oxygen in the inlet air. The rest of the NO_x emissions are formed from the reaction of fuel-bound nitrogen with oxygen in the inlet air.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 3.1.5 identifies achieved in practice BACT for NO_x emissions from lean-burn emergency natural gas IC engines ≥ 500 bhp as follows:

- NO_x emissions of ≤ 0.5 g/bhp-hr

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

The control option in step 1 is not technologically infeasible.

c. Step 3 - Rank remaining options by control effectiveness

- NO_x emissions of ≤ 0.5 g/bhp-hr

d. Step 4 - Cost Effectiveness Analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 6/1/22) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for NO_x emissions from this lean-burn emergency standby natural gas IC engine ≥ 500 bhp is having NO_x emissions of ≤ 0.5 g/bhp-hr. The applicant has proposed to install 3,629 bhp lean-burn emergency standby natural gas IC engines with NO_x emissions of 0.5 g/bhp-hr; therefore BACT for NO_x emissions is satisfied.

2. BACT Analysis for PM10 Emissions:

Particulate matter (PM10) emissions result from the incomplete combustion of various elements in the fuel. A small portion of the particulates is emitted through the crankcase vent.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 3.1.5, identifies achieved in practice BACT for PM10 emissions from lean-burn emergency natural gas IC engines as follows:

- Natural gas as fuel

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

The control option in step 1 is not technologically infeasible.

c. Step 3 - Rank remaining options by control effectiveness

- Natural gas as fuel

d. Step 4 - Cost Effectiveness Analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 6/1/22) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for PM10 emissions from this lean-burn emergency natural gas IC engine is having natural gas, LPG, or propane as fuel. The applicant has proposed to install three 3,629 bhp lean-burn emergency natural gas IC engines with natural gas as fuel; therefore BACT for PM10 emissions is satisfied.

3. BACT Analysis for VOC Emissions:

Volatile organic compounds (VOC) emissions are generated from the incomplete combustion of the fuel. Some VOCs are emitted from the crankcase of the engine as a result of piston ring blow-by.

a. Step 1 - Identify all control technologies

The SJVAPCD BACT Clearinghouse guideline 3.1.5 identifies achieved in practice BACT for VOC emissions from lean-burn emergency LPG/propane/natural gas IC engines as follows:

- VOC emissions ≤ 206 ppmv @ 15% O₂ (1.0 g/bhp-hr)

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

The control option listed in Step 1 is not technologically infeasible.

c. Step 3 - Rank remaining options by control effectiveness

- VOC emissions ≤ 206 ppmv @ 15% O₂ (1.0 g/bhp-hr)

d. Step 4 - Cost effectiveness analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 6/1/22) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for VOC emissions from this lean-burn emergency LPG/propane/natural gas IC engine is having VOC emissions of ≤ 206 ppmv @ 15% O₂ (1.0 g/bhp-hr). The applicant has proposed to install three 3,629 bhp lean-burn emergency natural gas IC engines with VOC emissions of 0.36 g/bhp-hr; therefore, BACT for VOC emissions is satisfied.

APPENDIX C

HRA Summary

San Joaquin Valley Air Pollution Control District

Health Risk Assessment Summary

Facility Name: FRESNO/CLOVIS REGIONAL WWTP
Facility ID, Project #: C-535, C-1261114

This Health Risk Assessment (HRA) Summary is provided as an attachment to the Engineering Evaluation supporting the Authority to Construct permitting project.

1. Overview

Under the District RMR policies (APR-1905 and APR-1906), the potential public health impacts associated with air toxic emissions from the proposed project were evaluated. This review ensures the project complies with the District's health risk policies and that the evaluation is protective of nearby residents, workers, and sensitive populations such as schools and homes.

Using conservative, health-protective assumptions and state-recommended risk assessment methods, the District determined that the project's potential health risks are **below established significance thresholds**.

The RMR process includes:

- a) Characterizing and estimating the project's potential air emissions from pollutants with associated health risk values as defined by the California Office of Environmental Health Hazard Assessment (OEHHA).
- b) Performing a screening level "Prioritization" using the prioritization methodology outlined in the California Air Pollution Control Officers Association (CAPCOA) Facility Prioritization Guidelines. A facility's priority status is determined using the prioritization thresholds listed in District Policy APR-1905. If the post-project cumulative facility increase in prioritization score is equal to or less than 1, the project is approvable with no further assessment. If a facility's total prioritization score exceeds 1, then an HRA is required.
- c) If applicable, performing an HRA using air dispersion modeling and risk assessment default inputs listed in District Policy APR-1906 and the District's Modeling Guidance. These methods use conservative and health protective assumptions consistent with statewide risk assessment guidance and are designed for protection of public health when estimating potential impacts.
- d) Determine whether the project triggers Toxic Best Available Control Technology (T-BACT). For new or modified emission units that exceed a cancer risk of one in a million, T-BACT must be implemented for the permit.

2. Executive Summary

The post-project cumulative facility prioritization score was greater than one. Therefore, an HRA was required. Based on the results of the health risk assessment (See Health Risk Evaluation Results table below), the District determined that the project's potential health impacts are **below established significance thresholds**.

Table 1. Health Risk Evaluation Results

Permit #	Maximum Individual Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
C-535-59-0	0.02	0.00	0.17
C-535-60-0	0.02	0.00	0.17
C-535-61-0	0.02	0.00	0.17
Incremental Project Totals	0.06	0.00	0.51
Post-Project Cumulative Facility Totals	5.36	0.00	0.53
Significance Thresholds	≤ 20	< 1	< 1
Below Significance Threshold	Yes	Yes	Yes

The project is approved **without Toxic Best Available Control Technology (T-BACT)**.

3. Air Toxic Emissions

Air toxics emissions for this project were calculated using the following methods:

- Fuel usage rates for the proposed engines were provided by the Permit Engineer. These usage rates were speciated into air toxics using emission factors derived from the 2000 AP42 emission factors for Natural Gas Fired Internal Combustion Engines. The use of a catalyst reduced TACs by 76% (NESHAP).

Table 2. Estimated Potential Air Toxics from Project

Pollutant	Hourly Emissions (lbs/hr)	Annual Emissions (lbs/yr)
1,1,2,2-Tetrachloroethane	3.16E-03	1.42E-01
1,1,2-Trichloroethane	2.51E-03	1.13E-01
1,1-Dichloroethane	1.87E-03	8.40E-02
1,2,4-Trimethylbenzene	1.13E-03	5.09E-02
1,2-Dichloropropane	2.13E-03	9.57E-02
1,3-Butadiene	2.11E-02	9.50E-01
1,3-Dichloropropene	2.09E-03	9.40E-02
2,2,4-Trimethylpentane	1.98E-02	8.90E-01
2-Methyl naphthalene	2.63E-03	1.18E-01

Acenaphthene	9.89E-05	4.45E-03
Acenaphthylene	4.37E-04	1.97E-02
Acetaldehyde	6.61E-01	2.98E+01
Acrolein	4.07E-01	1.83E+01
Benzene	3.48E-02	1.57E+00
Benzo[b]fluoranthene	1.31E-05	5.91E-04
Benzo[e]pyrene	3.28E-05	1.48E-03
Benzo[g,h,i]perylene	3.27E-05	1.47E-03
Biphenyl	1.68E-02	7.54E-01
Carbon tetrachloride	2.90E-03	1.31E-01
Chlorobenzene	2.40E-03	1.08E-01
Chloroform	2.25E-03	1.01E-01
Chrysene	5.48E-05	2.47E-03
Ethyl benzene	3.14E-03	1.41E-01
Ethyl chloride {Chlorethane}	1.48E-04	6.66E-03
Ethylene dibromide {EDB}	3.50E-03	1.58E-01
Ethylene dichloride {EDC}	1.87E-03	8.40E-02
Fluoranthene	8.78E-05	3.95E-03
Fluorene	4.48E-04	2.02E-02
Formaldehyde	4.18E+00	1.88E+02
Hexane	8.78E-02	3.95E+00
Isobutyraldehyde	7.99E-03	3.59E-01
Methanol	1.98E-01	8.90E+00
Methylene chloride {Dichloromethane}	1.58E-03	7.12E-02
Naphthalene	5.88E-03	2.65E-01
PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	6.13E-04	2.76E-02
Phenanthrene	8.22E-04	3.70E-02
Phenol	1.90E-03	8.54E-02
Pyrene	1.08E-04	4.84E-03
Styrene	1.87E-03	8.40E-02
Toluene	3.23E-02	1.45E+00
Vinyl chloride	1.18E-03	5.30E-02
Xylenes (mixed)	1.46E-02	6.55E-01

4. Health Risk Assessment (HRA) and Modeling Details

Since the facility's cumulative prioritization score was greater than 1, pursuant to District risk policies, a health risk assessment was required. The air dispersion modeling and health risk assessment were performed using the default settings outlined in District Policy APR-1906 and the District's Modeling Guidance. The HRA included (as appropriate):

- Potential air toxics increases from the proposed project,
- State-approved air dispersion modeling to predict how pollutants spread and disperse in the environment,
- Evaluating potential exposure at nearby residences, workplaces, and other

sensitive locations,

- Applying health risk values developed by the California Office of Environmental Health Hazard Assessment (OEHHA),
- Using conservative assumptions including operation at maximum permitted emission rates and conservative receptor exposure assumptions to ensure public health protection

These methods are consistent with District policy and statewide risk assessment guidance and are designed for protection of public health when estimating potential impacts. The project's specific modeling parameters are identified below.

Meteorological Data

Consistent with APR-1906, a refined dispersion modeling analysis was performed using the U.S.D. EPA's AERMOD model. Detailed stack parameters and site-specific meteorological data for 2018-2022 from Fresno (rural dispersion coefficient selected) were used to predict how emissions disperse and impact surrounding receptors. The selected meteorological dataset represents the nearest representative station to the project site and is consistent with District modeling guidance. The modeled concentrations were then evaluated using state-approved health risk factors to calculate cancer risk and acute and chronic indices for the project.

Air Dispersion Modeling Parameters

The AERMOD model is utilized for air dispersion modeling for HRA and AAQA purposes. The parameters outlined below were used for the analysis:

Table 3. Point Source Parameters

Unit ID	Unit Description	Release Height (m)	Temp. (°K)	Exit Velocity (m/sec)	Stack Diameter (m)	Vertical / Horizontal / Capped
59	3629 BHP Emergency NG ICE	5.27	730	47.32	0.51	Vertical
60	3629 BHP Emergency NG ICE	5.27	730	47.32	0.51	Vertical
61	3629 BHP Emergency NG ICE	5.27	730	47.32	0.51	Vertical

5. Permit Requirements Based on HRA

To ensure that the potential risk does not exceed the levels evaluated in the risk assessment and that health risks remain below established significance thresholds, the following shall be included as permit requirements:

Unit # 59-0, 60-0, 61-0

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall

not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.

2. 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 45 hours per calendar year.

APPENDIX D

SSPE1 Calculations

ATC C-535-9-19: MODIFICATION OF WASTEWATER TREATMENT DIGESTER TANKS SERVED BY A 36.3 MMBTU/HR JOHN ZINK COMPANY ENCLOSED DIGESTER GAS FLARE: DESIGNATE AS EMERGENCY FLARE AND LIMIT NON-EMERGENCY USAGE TO 1,815 MMBTU/YEAR AND REMOVE TOTAL COMBINED NOX EMISSION LIMIT FOR UNITS C-535-9, -24, AND -44

Assumptions:

36.3 MMBtu/hr enclosed flare (Permit Unit C-535-9) will be limited to emergency use except for flaring up to 1,815 MMBtu/year (equivalent to 50 hour/year at maximum rated capacity) for maintenance and testing

Emission Factors:

Emission Factors for C-535-9 - 36.3 MMBtu/hr Flare		
Pollutant	lb/MMBtu	Source
NO _x	0.06	ATC C-535-19-9
SO _x	0.0614	ATC C-535-19-9
PM ₁₀	0.015	ATC C-535-19-9
CO	0.29	ATC C-535-19-9
VOC	0.0027	ATC C-535-19-9

Calculations:

Annual PE					
Pollutant	Emission Factor (lb/MMBtu)	x	Max Annual Heat Rate for Non-Emergency Purposes (MMBtu/yr)	=	PE2 (lb/year)
NOX	0.06	x	1,815	=	109
SOX	0.0614	x	1,815	=	111
PM10	0.015	x	1,815	=	27
CO	0.29	x	1,815	=	526
VOC	0.0027	x	1,815	=	5

C-535-10-4 – 2,307 bhp Diesel-Fired Emergency IC Engine Powering an Electrical Generator

Assumptions

Maximum Engine Rating:	2,307 bhp (Current Permit)
Non-emergency operating schedule:	20 hours/year (Current Permit)
Fuel Used:	CARB certified diesel fuel with a maximum sulfur content of 0.0015% (Current permit and ATCM)
Density of diesel fuel:	7.1 lb/gal
Fuel heating value:	137,381 Btu/gal (US Energy Information Administration)
bhp to Btu/hr conversion:	2,545 Btu/bhp-hr

Thermal efficiency of engine: commonly $\approx 35\%$
 Conversion factor: 453.59 g/lb

Emission Factors

Emission Factors for C-535-10-4		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	10.7	District Project C-950155 based on "emissions data from manufacturer
*SO _x	0.0051	Ultra-Low Sulfur Fuel See Mass Balance Equation Below
PM ₁₀	0.218	District Project C-950155 based on emissions data from manufacturer
CO	2.16	
VOC	0.109	

*The SO_x EF is based on the use of ultra-low sulfur diesel fuel with 0.0015% sulfur by weight, as shown in the equation below.

$$\frac{0.0015 \text{ lb} - \text{S}}{100 \text{ lb} - \text{Diesel}} \times \frac{64 \text{ lb} - \text{SO}_2}{32 \text{ lb} - \text{S}} \times \frac{7.1 \text{ lb} - \text{Diesel}}{\text{gal} - \text{Diesel}} \times \frac{1 \text{ gal} - \text{Diesel}}{137,381 \text{ Btu}} \times \frac{1 \text{ Btu}_{\text{in}}}{0.35 \text{ Btu}_{\text{out}}} \times \frac{2,545 \text{ Btu}}{1 \text{ bhp} - \text{hr}} \times \frac{453.59 \text{ g}}{1 \text{ lb}} = 0.0051 \frac{\text{g} - \text{SO}_x}{\text{bhp} - \text{hr}}$$

PE Calculations

Annual PE for C-535-10 (Emergency IC Engine)							
Pollutant	EF (g/bhp-hr)	x	Engine bhp	x	(hr/yr)	÷ 453.59 (g/lb) =	lb/yr
NO _x	10.7	x	2,307	x	20	÷ 453.59 (g/lb) =	1,088
SO _x	0.0051	x	2,307	x	20	÷ 453.59 (g/lb) =	1
PM ₁₀	0.218	x	2,307	x	20	÷ 453.59 (g/lb) =	22
CO	2.16	x	2,307	x	20	÷ 453.59 (g/lb) =	220
VOC	0.109	x	2,307	x	20	÷ 453.59 (g/lb) =	11

C-535-13-8 – Odor Control Scrubbing System

Assumptions:

- VOC is the only affected pollutant of concern emitted by the operation.
- The influent flow rate through the odor control system is 106 million gallons per day (MGD) (current permit)
- VOC emissions from the operation are limited to 0.075 lb-VOC per million gallons (MG) of influent flow (Current permit and Project C-1152998).
- Maximum equipment operating schedule is 24 hr/day, 365 day/year (current permit)

Emission Factor:

VOC = 0.075 lb-VOC/MG (current permit)

Calculations:

$$PE = \text{Throughput (MG/day)} \times EF \text{ (lb-VOC/MG)} \times 365 \text{ day/year}$$

$$PE = (106 \text{ MG/day}) \times (0.075 \text{ lb-VOC/MG}) \times 365 \text{ day/year} \\ = 2,902 \text{ lb-VOC/year}$$

C-535-17-4 – 455 bhp Diesel-Fired Emergency IC Engine Powering an Electric GeneratorAssumptions

Non-emergency operating schedule:	20 hours/year (Current Permit)
Fuel Used:	CARB certified diesel fuel with a maximum sulfur content of 0.0015% (Current permit and ATCM)
Density of diesel fuel:	7.1 lb/gal
Fuel heating value:	137,381 Btu/gal (US Energy Information Administration)
bhp to Btu/hr conversion:	2,545 Btu/bhp-hr
Thermal efficiency of engine:	commonly $\approx$ 35%
Conversion factor:	453.59 g/lb

Emission Factors

Emission Factors for C-535-17-4		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	5.61	District Project C-980317 based on "emissions data from manufacturer
SO _x	0.0051	Ultra-Low Sulfur Fuel See Mass Balance Equation Above
PM ₁₀	0.19	District Project C-980317 based on emissions data from manufacturer
CO	1.50	
VOC	0.31	

PE Calculations

Annual PE for C-535-17 (Emergency IC Engine)							
Pollutant	EF (g/bhp-hr)	x	Engine bhp	x	(hr/yr)	÷ 453.59 (g/lb) =	lb/yr
NO _x	5.61	x	455	x	20	÷ 453.59 (g/lb) =	113
SO _x	0.0051	x	455	x	20	÷ 453.59 (g/lb) =	0
PM ₁₀	0.19	x	455	x	20	÷ 453.59 (g/lb) =	4
CO	1.50	x	455	x	20	÷ 453.59 (g/lb) =	30
VOC	0.31	x	455	x	20	÷ 453.59 (g/lb) =	6

C-535-26-7 – Digester Gas Treatment SystemAssumptions

- Maximum Heat input rating is 7.46 MMBtu/hr (Current Permit)

- The maximum operating schedule is 24 hours per day and 365 days per year (No limit in Current Permit)
- Maximum Inlet H₂S concentration of gas processed through the gas treatment system: 200 ppmv (Current permit limit)
- Inlet Waste Gas Flow Rate is 704 scfm (proposed by applicant in Project C-1110245)

Emission Factors

Emission Factors for C-535-26-7		
Pollutant	lb/MMBtu	Source
NO _x	0.06	Current Permit C-535-26-7
SO _x	0.191	Inlet flowrate of 704 scfm, 200 ppmv H ₂ S in gas processed, and 7.46 MMBtu/hr rating (see equation below)
PM ₁₀	0.016	Current Permit C-535-26-7
CO	0.20	Current Permit C-535-26-7
VOC	0.084	Current Permit C-535-26-7

$$\frac{200 \text{ ft}^3 \text{ H}_2\text{S}}{10^6 \text{ ft}^3} \times \frac{32.06 \text{ lb} - \text{S}}{\text{lb} - \text{mol H}_2\text{S}} \times \frac{\text{lb} - \text{mol}}{379.5 \text{ ft}^3} \times \frac{64.06 \text{ lb} - \text{SO}_2}{32.06 \text{ lb} - \text{S}} = 33.76 \frac{\text{lb} - \text{SO}_x}{10^6 \text{ ft}^3}$$

$$\frac{33.76 \text{ lb} - \text{SO}_x}{10^6 \text{ ft}^3} \times \frac{704 \text{ ft}^3}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} = 1.426 \frac{\text{lb} - \text{SO}_x}{\text{hr}} \div \frac{7.46 \text{ MMBtu}}{\text{hr}} = 0.191 \frac{\text{lb} - \text{SO}_x}{\text{MMBtu}}$$

PE Calculations

Annual PE for C-535-26-7									
Pollutant	Emission Factor (lb/MMBtu)	x	Max Heat Input (MMBtu/hr)	x	Daily Hours of Operation (hr/day)	x	Day/Year Operated (day/yr)	=	PE2 (lb/year)
NO _x	0.06	x	7.46	x	24	x	365	=	3,921
SO _x	0.191	x	7.46	x	24	x	365	=	12,482
PM ₁₀	0.016	x	7.46	x	24	x	365	=	1,046
CO	0.20	x	7.46	x	24	x	365	=	13,070
VOC	0.084	x	7.46	x	24	x	365	=	5,489

Permit Units C-535-44: Transportable Diesel IC Engines

Assumptions

Non-emergency operating schedule: 2,160 hours/year (ATC C-535-44-2)

Fuel Used: CARB certified diesel fuel with a maximum sulfur content of 0.0015% (Current permit and ATCM)

Density of diesel fuel: 7.1 lb/gal

Fuel heating value: 137,381 Btu/gal (US Energy Information Administration)

bhp to Btu/hr conversion: 2,545 Btu/bhp-hr

Thermal efficiency of engine: commonly ≈ 35%

Conversion factor: 453.59 g/lb

Emission Factors

Emission Factors for C-535-44		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	3.12	Current Permit
SO _x	0.0051	Ultra-Low Sulfur Fuel See Mass Balance Equation Above
PM ₁₀	0.0007	Current Permit
CO	0.0746	Current Permit
VOC	0.16	Current Permit

Annual PE1 for C-535-44 (Transportable IC Engine Powering a Pump)							
Pollutant	EF (g/bhp-hr)	x	Engine bhp	x	(hr/yr)	÷ 453.59 (g/lb) =	lb/yr
NO _x	3.12	x	74	x	2,160	÷ 453.59 (g/lb) =	1,099
SO _x	0.0051	x	74	x	2,160	÷ 453.59 (g/lb) =	2
PM ₁₀	0.0007	x	74	x	2,160	÷ 453.59 (g/lb) =	0
CO	0.0746	x	74	x	2,160	÷ 453.59 (g/lb) =	26
VOC	0.16	x	74	x	2,160	÷ 453.59 (g/lb) =	56

C-535-48-1 – Metal Parts and Wood Products Coating OperationAssumptions

- Permitted VOC emissions from metal parts and products coating operations are limited to 280 lb-VOC/year (Current Permit)
- Permitted VOC emissions from wood products coating operations are limited to 230 lb-VOC/year (Current Permit)
- PM₁₀ emissions from metal parts and products coating operations are limited to 7 lb-PM₁₀/year (Current Permit)
- PM₁₀ emissions from wood products coating operations are limited to 7 lb-PM₁₀/year (Current Permit)
- VOC emissions are calculated daily based on the VOC content and amount of each coating and solvent used (Current Permit)
- PM₁₀ emissions are calculated daily based on the solids content and amount of each coating used, the transfer efficiency of the coating equipment, and the control efficiency of the booth filters (Current Permit)
- Total PE from the operation are the total emissions from metal parts and products coating operations and wood products coating operations

Emission Rates

Emission Rates for C-535-48-1			
Pollutant	Metal Products Coating (lb/yr)	Wood Products Coating (lb/yr)	Source
PM ₁₀	7	7	Current Permit C-535-48-1
VOC	280	230	Current Permit C-535-48-1

PE Calculations

$$\begin{aligned}
 PE_{VOC} &= \text{Metal Products Coating} + \text{Wood Products Coating} \\
 &= 280 \text{ lb-VOC/yr} + 230 \text{ lb-VOC/yr} = 510 \text{ lb-VOC/yr}
 \end{aligned}$$

C-535-49-1 & -53-1 – 247 BHP Diesel-Fired Emergency IC Engines Powering an Electric GeneratorAssumptions

Non-emergency operating schedule: 50 hours/year (Current Permits)
 Fuel Used: CARB certified diesel fuel with a maximum sulfur content of 0.0015% (Current permit and ATCM)
 Density of diesel fuel: 7.1 lb/gal
 Fuel heating value: 137,381 Btu/gal (US Energy Information Administration)
 bhp to Btu/hr conversion: 2,545 Btu/bhp-hr
 Thermal efficiency of engine: commonly $\approx$ 35%
 Conversion factor: 453.59 g/lb

Emission Factors

Emission Factors for C-535-49-1 & -53-1		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	2.61	Current Permits C-535-49-1 & -53-1
SO _x	0.0051	Ultra-Low Sulfur Fuel See Mass Balance Equation Above
PM ₁₀	0.10	Current Permits C-535-49-1 & -53-1
CO	0.75	Current Permits C-535-49-1 & -53-1
VOC	0.14	Current Permits C-535-49-1 & -53-1

PE Calculations

Annual PE for C C-535-49-1 & -53-1 (Emergency IC Engines)							
Pollutant	EF (g/bhp-hr)	x	Engine bhp	x	(hr/yr)	÷ 453.59 (g/lb) =	lb/yr
NO _x	2.61	x	247	x	50	÷ 453.59 (g/lb) =	71
SO _x	0.0051	x	247	x	50	÷ 453.59 (g/lb) =	0
PM ₁₀	0.10	x	247	x	50	÷ 453.59 (g/lb) =	3
CO	0.75	x	247	x	50	÷ 453.59 (g/lb) =	20
VOC	0.14	x	247	x	50	÷ 453.59 (g/lb) =	4

ATCs C-535-50-0 & -51-0: 75.1 MMBTU/HR JOHN ZINK ZULE ULTRA-LOW EMISSION ENCLOSED DIGESTER GAS FLAREAssumptions

- The maximum design rating of each of the two proposed ultra-low emission digester gas flares is 75.1 MMBtu/hr
- The existing and proposed digester gas flares only combust digester gas with the exception of the flare pilot light, which is fueled with PUC regulated natural gas
- Consistent with District practice for flares, the pilot light of the flare will be treated as a separate emission unit that is considered to have insignificant emissions and will be exempt from District permitting requirements as a low-emitting
- The total heat input of the gas combusted in the flare shall not exceed 1,802.4 MMBtu/day based on the higher heating value (HHV) of the gas flared.
- The flares will be limited to 26,056 lb-NO_x/year, equivalent to 79% of their total combined capacity. (ATC)

Emission Factors

Emission Factors for ATC C-535-50-0 and -51-0 (75.1 MMBtu/hr Ultra-Low-Emission Digester Flares)		
Pollutant	lb/MMBtu	Source
NO _x	0.025	ATCs C-535-50-0 and -51-0
SO _x	0.0614	200 ppmvd sulfur in gas flared (Proposed by applicant – See Equation Above)
PM ₁₀	0.015	AP-42 Draft Table 2.4.4 (October 2008) (Value for Landfill Gas Flares)
CO	0.06	Flare manufacturer guarantee and proposed by applicant
VOC	0.0027	Proposed by Applicant

Emission Factors

Annual PE for ATCs C-535-50-0 & -51-0 (Each Proposed Low-Emission Flare)									
Pollutant	Emission Factor (lb/MMBtu)	x	Max Heat Value of Gas Flared (MMBtu/hr)	x	Daily Hours of Operation (hr/day)	x	Day/Year Operated (day/yr)	=	PE2 (lb/year)
NO _x	0.025	x	75.1	x	24	x	365	=	16,447
SO _x	0.0614	x	75.1	x	24	x	365	=	40,394
PM ₁₀	0.015	x	75.1	x	24	x	365	=	9,868
CO	0.06	x	75.1	x	24	x	365	=	39,473
VOC	0.0027	x	75.1	x	24	x	365	=	1,776

The previous tables contain the PE2 calculation for each of the 75.1 MMBtu/hr flares. The flares will be limited to 26,056 lb-NO_x/year, equivalent to 79% of their total combined capacity.

Permit Units C-535-54: Emergency Standby Diesel IC Engine Powering an Electrical GeneratorAssumptions

Emergency operating schedule:	24 hours/day
Non-emergency operating schedule:	50 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%
PM ₁₀ fraction of diesel exhaust:	0.96 (CARB, 1988)
Conversion factor:	1.34 bhp/kw

Emission Factors

Emission Factors for C-535-54		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	2.65	Current Permit
SO _x	0.0051	Ultra-Low Sulfur Fuel See Mass Balance Equation Above
PM ₁₀	0.12	Current Permit
CO	2.01	Current Permit
VOC	0.14	Current Permit

Annual PE1 for C-535-54							
Pollutant	EF (g/bhp-hr)	x	Engine bhp	x	(hr/yr)	÷ 453.59 (g/lb) =	lb/yr
NO _x	2.65	x	539	x	50	÷ 453.59 (g/lb) =	157
SO _x	0.0051	x	539	x	50	÷ 453.59 (g/lb) =	2
PM ₁₀	0.12	x	539	x	50	÷ 453.59 (g/lb) =	7
CO	2.01	x	539	x	50	÷ 453.59 (g/lb) =	119
VOC	0.14	x	539	x	50	÷ 453.59 (g/lb) =	8

Permit Units C-535-56 and '-57: Transportable Diesel IC Engines Powering Water Transfer Pumps

Assumptions

Operating schedule:	300 hours/year
Fuel Used:	CARB certified diesel fuel with a maximum sulfur content of 0.0015% (Current permit and ATCM)
Density of diesel fuel:	7.1 lb/gal
Fuel heating value:	137,381 Btu/gal (US Energy Information Administration)
bhp to Btu/hr conversion:	2,545 Btu/bhp-hr
Thermal efficiency of engine:	commonly ≈ 35%
Conversion factor:	453.59 g/lb

Emission Factors

Emission Factors for C-535-56 and '-57		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	0.25	Current Permit
SO _x	0.0051	Ultra-Low Sulfur Fuel See Mass Balance Equation Above
PM ₁₀	0.01	Current Permit
CO	0.07	Current Permit
VOC	0.01	Current Permit

Annual PE1 for C-535-56 and '-57							
Pollutant	EF (g/bhp-hr)	x	Engine bhp	x	(hr/yr)	÷ 453.59 (g/lb) =	lb/yr
NO _x	0.25	x	140	x	300	÷ 453.59 (g/lb) =	23
SO _x	0.0051	x	140	x	300	÷ 453.59 (g/lb) =	0
PM ₁₀	0.01	x	140	x	300	÷ 453.59 (g/lb) =	1
CO	0.07	x	140	x	300	÷ 453.59 (g/lb) =	6
VOC	0.01	x	140	x	300	÷ 453.59 (g/lb) =	1

Permit Units C-535-58: Transportable Diesel IC Engine Powering an Air Compressor**Assumptions**

Operating schedule:	3,329 hours/year
Fuel Used:	CARB certified diesel fuel with a maximum sulfur content of 0.0015% (Current permit and ATCM)
Density of diesel fuel:	7.1 lb/gal
Fuel heating value:	137,381 Btu/gal (US Energy Information Administration)
bhp to Btu/hr conversion:	2,545 Btu/bhp-hr
Thermal efficiency of engine:	commonly $\approx$ 35%
Conversion factor:	453.59 g/lb

Emission Factors

Emission Factors for C-535-58		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	0.22	Current Permit
SO _x	0.0051	Ultra-Low Sulfur Fuel See Mass Balance Equation Above
PM ₁₀	0.01	Current Permit
CO	0.01	Current Permit
VOC	0.01	Current Permit

Annual PE1 for C-535-58							
Pollutant	EF (g/bhp-hr)	x	Engine bhp	x	(hr/yr)	÷ 453.59 (g/lb) =	lb/yr
NO _x	0.22	x	122	x	3,329	÷ 453.59 (g/lb) =	197
SO _x	0.0051	x	122	x	3,329	÷ 453.59 (g/lb) =	5
PM ₁₀	0.01	x	122	x	3,329	÷ 453.59 (g/lb) =	9
CO	0.01	x	122	x	3,329	÷ 453.59 (g/lb) =	9
VOC	0.01	x	122	x	3,329	÷ 453.59 (g/lb) =	9

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:

Typical calculations for C-535-59-0, '-60-0, '-61-0:

$$\begin{aligned} PE2_{\text{quarterly}} &= PE2_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 12 \text{ lb PM}_{10}/\text{year} \div 4 \text{ qtr/year} \\ &= 3 \text{ lb PM}_{10}/\text{qtr} \end{aligned}$$

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

Quarterly NEC [QNEC]			
Pollutant	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	45	0	45
SO _x	0.75	0	0.75
PM ₁₀	3	0	3
CO	118	0	118
VOC	32.5	0	32.5

APPENDIX F

Compliance Certification



San Joaquin Valley Air Pollution Control District



TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

☐ ADMINISTRATIVE AMENDMENT ☐ MINOR MODIFICATION ☒ SIGNIFICANT MODIFICATION

COMPANY NAME:	City of Fresno	FACILITY ID:
1. Type of Organization:	☐ Corporation ☐ Sole Ownership ☒ Government ☐ Partnership ☐ Utility	
2. Owner's Name:	City of Fresno	
3. Agent to the Owner:	Samuel C. Nadores, Project Manager	

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

- ☒ Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- ☒ Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- ☒ Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- ☒ Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true, accurate, and complete.
- ☐ For minor modifications, this application meets the criteria for use of minor permit modification procedures pursuant to District Rule 2520.

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

Kristina Matthews
Signature of Responsible Official

3/11/2026
Date

Kristina Matthews
Name of Responsible Official (please print)

Program Manager
Title of Responsible Official (please print)

APPENDIX G

AAQA Summary

San Joaquin Valley Air Pollution Control District

Ambient Air Quality Analysis Summary

Facility Name: FRESNO/CLOVIS REGIONAL WWTP
Facility ID, Project #: C-535, C-1261114

1. Overview

The District evaluated the proposed project's potential impact 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 applies 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. This progressive framework ensures that potential impacts are evaluated conservatively at the screening stage and refined as necessary to provide a thorough and health-protective assessment.

The modeling analysis predicts the maximum ground-level 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 detailed source parameters, including emission rates.

2. Ambient Air Quality Analysis (AAQA) Results Summary

Pollutant	Air Quality Standard (State/Federal)				
	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	N/A	Pass	N/A	N/A
NO _x	Pass	N/A	N/A	N/A	Pass
SO _x	Pass	N/A	N/A	Pass	Pass
H ₂ S	Pass	N/A	N/A	N/A	N/A
PM ₁₀	N/A	N/A	N/A	Pass	Pass
PM _{2.5}	N/A	N/A	N/A	Pass	Pass
Ozone	Pass	N/A	Pass	N/A	N/A

The project is **not expected to cause or contribute to an exceedance of any applicable NAAQS or CAAQS, nor does it exceed applicable Significant Impact Levels (SILs).**

AAQA Clarifications

- The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2) unless otherwise noted below.
- 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 PM₁₀ concentrations were below the District SIL for fugitive sources of 10.4 µg/m³ for the 24-hour average concentration and 2.08 µg/m³ for the annual concentration.
- Modeled PM_{2.5} concentrations were below the District SIL for non-fugitive sources of 1.2 µg/m³ for the 24-hour average concentration and 0.13 µg/m³ for the annual concentration.
- Modeled PM_{2.5} concentrations were below the District SIL for fugitive sources of 2.5 µg/m³ for the 24-hour average concentration and 0.63 µg/m³ for the annual concentration.

AAQA Monitoring Site

Ambient air concentrations of criteria pollutants are measured 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 monitoring stations were used for this evaluation:

Monitoring Stations				
Pollutant	Station Name	County	City	Measurement Year
CO	Clovis-Villa	Fresno	Clovis	2023
NO _x	Clovis-Villa	Fresno	Clovis	2023
PM ₁₀	Clovis-Villa	Fresno	Clovis	2023
PM _{2.5}	Clovis-Villa	Fresno	Clovis	2023
SO _x	Fresno - Garland	Fresno	Fresno	2023

3. Proposed Permit Conditions

To ensure that the emissions do not exceed any established ambient air quality standards, the following shall be included as permit requirements:

Unit # 59-0, 60-0, 61-0

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.
2. 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 45 hours per calendar year.

4. Meteorological Data & Air Dispersion Modeling Parameters

Dispersion modeling was performed using the U.S. EPA's AERMOD model. Detailed stack parameters and site-specific meteorological data were used to predict how emissions disperse. The meteorological data and modeling parameters utilized for the project HRA were also utilized for this AAQA analysis.

APPENDIX H

Facility C-535 HAP Potential to Emit Report

Facility HAP Totals

CAS	Pollutant Name	Emissions	Major HAP
79345	1,1,2,2-Tetrachloroethane	6.30E-05 TON/YR	☐
79005	1,1,2-Trichloroethane	5.01E-05 TON/YR	☐
75343	1,1-Dichloroethane	3.72E-05 TON/YR	☐
78875	1,2-Dichloropropane	4.24E-05 TON/YR	☐
106990	1,3-Butadiene	4.21E-04 TON/YR	☐
542756	1,3-Dichloropropene	4.16E-05 TON/YR	☐
123911	1,4-Dioxane	4.35E-04 TON/YR	☐
540841	2,2,4-Trimethylpentane	3.94E-04 TON/YR	☐
91576	2-Methyl naphthalene	5.23E-05 TON/YR	☐
83329	Acenaphthene	1.97E-06 TON/YR	☐
208968	Acenaphthylene	8.71E-06 TON/YR	☐
75070	Acetaldehyde	1.52E-02 TON/YR	☐
107028	Acrolein	8.10E-03 TON/YR	☐
71432	Benzene	5.81E-02 TON/YR	☐
205992	Benzo[b]fluoranthene	2.61E-07 TON/YR	☐
192972	Benzo[e]pyrene	6.54E-07 TON/YR	☐
191242	Benzo[g,h,i]perylene	6.52E-07 TON/YR	☐
92524	Biphenyl	3.34E-04 TON/YR	☐
56235	Carbon tetrachloride	9.28E-04 TON/YR	☐
108907	Chlorobenzene	5.14E-04 TON/YR	☐
67663	Chloroform	8.02E-01 TON/YR	☐
218019	Chrysene	1.09E-06 TON/YR	☐
98828	Cumene	3.11E-05 TON/YR	☐
117817	Di(2-ethylhexyl) phthalate	4.35E-04 TON/YR	☐
100414	Ethyl benzene	2.30E-01 TON/YR	☐

CAS	Pollutant Name	Emissions		Major HAP
75003	Ethyl chloride {Chloroethane}	2.95E-06	TON/YR	☐
106934	Ethylene dibromide {EDB}	3.60E-04	TON/YR	☐
107062	Ethylene dichloride {EDC}	6.18E-04	TON/YR	☐
206440	Fluoranthene	1.75E-06	TON/YR	☐
86737	Fluorene	8.93E-06	TON/YR	☐
50000	Formaldehyde	1.62E+00	TON/YR	☐
822060	Hexamethylene-1,6-diisocyanate	4.00E-04	TON/YR	☐
110543	Hexane	1.75E-03	TON/YR	☐
7647010	Hydrochloric acid	0.00E+00	TON/YR	☐
67561	Methanol	3.94E-03	TON/YR	☐
71556	Methyl chloroform {1,1,1-Trichloroethane}	3.65E-01	TON/YR	☐
108101	Methyl isobutyl ketone {Hexone}	1.61E-03	TON/YR	☐
75092	Methylene chloride {Dichloromethane}	9.19E-01	TON/YR	☐
91203	Naphthalene	1.17E-04	TON/YR	☐
1151	PAHs, total, w/o individ. components reported [Treated	1.22E-05	TON/YR	☐
106467	p-Dichlorobenzene	4.18E-01	TON/YR	☐
127184	Perchloroethylene {Tetrachloroethene}	1.27E-01	TON/YR	☐
85018	Phenanthrene	1.64E-05	TON/YR	☐
108952	Phenol	8.53E-01	TON/YR	☐
129000	Pyrene	2.14E-06	TON/YR	☐
100425	Styrene	4.34E-01	TON/YR	☐
108883	Toluene	5.06E-01	TON/YR	☐
79016	Trichloroethylene	2.41E-01	TON/YR	☐
75014	Vinyl chloride	2.12E-03	TON/YR	☐
75354	Vinylidene chloride	9.01E-04	TON/YR	☐
1330207	Xylenes (mixed)	6.72E-01	TON/YR	☐
TOTAL		7.28E+00	TON/YR	☐