San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

DEC 2 1 2017

Mr. Dallas Belcher
Naval Air Station Lemoore
750 Enterprise Ave
Lemoore, CA 93246-5001

Re: Notice of Preliminary Decision – ATC / Certificate of Conformity
District Facility # C-2106
Project # C-1173113

Dear Mr. Belcher:

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. Naval Air Station Lemoore is proposing to install one 1,193 bhp Tier 2 certified diesel-fired emergency standby IC engine, one 460 bhp Tier 3 certified diesel-fired emergency standby IC engine, and one 197 bhp Tier 3 certified diesel-fired emergency standby IC engine each powering an electrical generator.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the 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,

Arnaud Marjollet
Director of Permit Services

Enclosures

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

www.valleyair.org www.healthyairliving.com

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

Facility Name:	Naval Air Station Lemoore	Date:	December 19, 2017
Mailing Address:	750 Enterprise Ave Lemoore CA, 93246-5001	Engineer:	Andrea Ogden
		Lead Engineer:	Robert Gilles
Contact Person:	Dallas Belcher		
Telephone:	(559) 998-2838		
E-mail:	Dallas.belcher@navy.mil		
Application #:	C-2106-188-0, '-189-0 and '-190-0		
Project #:	C-1173113		
Deemed Complete:	November 9, 2017		

I. Proposal

Naval Air Station Lemoore is proposing to install one 1,193 bhp Tier 2 certified diesel-fired emergency standby IC engine, one 460 bhp Tier 3 certified diesel-fired emergency standby IC engine, and one 197 bhp Tier 3 certified diesel-fired emergency standby IC engine each powering an electrical generator.

Naval Air Station Lemoore received their Title V Permit on August 31, 2004. This modification can be classified as a Title V significant modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Naval Air Station Lemoore has applied to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410 Prevention of Significant Deterioration (6/16/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4002 National Emission Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4701 Internal Combustion Engines - Phase 1 (8/21/03)
Rule 4702 Internal Combustion Engines (11/14/13)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment

CH&SC 42301.6 School Notice
Title 17 CCR, Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The equipment will be located at 90 N Street in Lemoore, CA.

The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

New emergency engines powering generators are typically limited to 50 hours per year. However, if the PM emissions rate is less than or equal to 0.01 g/bhp-hr, the engine may be operated up to 100 hours/year for maintenance and testing if no other appliciable regulation has a lower limit. However these engines are subject to 40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines which limits emergency stationary IC engines to 50 hours per year to be considered an emergency engine.

C-2106-188-0

This emergency standby engine powers an electrical generator and has a PM emissions rate less than or equal to 0.01 g/bhp-hr. Other than emergency standby operation, the engine may be operated up to 50 hours per year for maintenance and testing purposes.

C-2106-189-0 and -190-0

These emergency standby engines each power an electrical generator and have a PM emissions rate greater than 0.01 g/bhp-hr. Other than emergency standby operation, each engine may be operated up to 50 hours per year for maintenance and testing purposes.

V. Equipment Listing

C-2106-188-0: 1,193 BHP (INTERMITTENT) MTU MODEL 12V 2000 G85 TB TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

C-2106-189-0: 460 BHP (INTERMITTENT) MTU MODEL 6R1600G80S TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

C-2106-190-0: 197 BHP (INTERMITTENT) MERCEDES-BENZ MODEL OM924LA TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

VI. Emission Control Technology Evaluation

The applicant has proposed to install a Tier 2 certified diesel-fired IC engine and two Tier 3 certified diesel-fired IC engines that are fired on very low-sulfur diesel fuel.

The proposed engines meet the latest Tier Certification requirements for emergency standby engines; therefore, the engines meet the latest ARB/EPA emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide (see Appendix C for copies of the EPA executive orders).

The use of CARB certified diesel fuel (0.0015% by weight sulfur maximum) reduces SO_x emissions by over 99% from standard diesel fuel.

VII. General Calculations

A. Assumptions

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

C-2106-188-0

The engine has certified NO_x + VOC emissions of 4.66 g/bhp-hr. It will be assumed the NOx + VOC emission factor is split 95% NOx and 5% VOC (per the Carl Moyer program).

C-2106-189-0

The engine has certified NOx + VOC emissions of 4.14 g/bhp-hr. It will be assumed the NOx + VOC emission factor is split 95% NOx and 5% VOC (per the Carl Moyer program).

C-2106-190-0

The engine has certified NOx + VOC emissions of 3.61 g/bhp-hr. It will be assumed the NOx + VOC emission factor is split 95% NOx and 5% VOC (per the Carl Moyer program).

B. Emission Factors

Emission Factors (C-2106-188-0)			
Pollutant	**Emission Factor (g/bhp-hr)**	**Emission Factor (g/kw-hr)**	**Source**
NO_X	4.43	5.94	ARB/EPA Certification
SO_X	0.0051	0.0068	Mass Balance Equation Below
PM_{10}	0.01	0.01	ARB/EPA Certification
CO	0.45	0.60	ARB/EPA Certification
VOC	0.23	0.31	ARB/EPA Certification

Emission Factors (C-2106-189-0)			
Pollutant	**Emission Factor (g/bhp-hr)**	**Emission Factor (g/kw-hr)**	**Source**
NO_X	3.93	5.27	ARB/EPA Certification
SO_X	0.0051	0.0068	Mass Balance Equation Below
PM_{10}	0.04	0.05	ARB/EPA Certification
CO	0.52	0.70	ARB/EPA Certification
VOC	0.21	0.28	ARB/EPA Certification

Emission Factors (C-2106-190-0)			
Pollutant	**Emission Factor (g/bhp-hr)**	**Emission Factor (g/kw-hr)**	**Source**
NO_X	3.43	4.60	ARB/EPA Certification
SO_X	0.0051	0.0068	Mass Balance Equation Below
PM_{10}	0.08	0.11	ARB/EPA Certification
CO	1.42	1.90	ARB/EPA Certification
VOC	0.18	0.24	ARB/EPA Certification

$$\frac{0.000015\ lb-S}{lb-fuel}\times\frac{7.1\ lb-fuel}{gallon}\times\frac{2\ lb-SO_2}{1\ lb-S}\times\frac{1\ gal}{137{,}000\ Btu}\times\frac{1\ bhp\ input}{0.35\ bhp\ out}\times\frac{2{,}542.5\ Btu}{bhp-hr}\times\frac{453.6\ g}{lb}=0.0051\ \frac{g-SO_x}{bhp-hr}$$

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since these are new emissions units, PE1 = 0.

2. Post-Project Potential to Emit (PE2)

The daily and annual PE2 are calculated as follows:

Daily PE2 (lb-pollutant/day) = EF (g-pollutant/bhp-hr) x rating (bhp) x operation (hr/day) / 453.6 g/lb

Annual PE2 (lb-pollutant/yr) = EF (g-pollutant/bhp-hr) x rating (bhp) x operation (hr/yr) / 453.6 g/lb

Post Project Emissions (PE2) (C-2106-188-0)						
Pollutant	**Emissions Factor (g/bhp-hr)**	**Rating (bhp)**	**Daily Hours of Operation (hrs/day)**	**Annual Hours of Operation (hrs/year)**	**Daily PE2 (lb/day)**	**Annual PE2 (lb/year)**
NO_x	4.43	1,193	24	50	**279.6**	**583**
SO_x	0.0051	1,193	24	50	**0.3**	**1**
PM_{10}	0.01	1,193	24	50	**0.6**	**1**
CO	0.45	1,193	24	50	**28.4**	**59**
VOC	0.23	1,193	24	50	**14.5**	**30**

Post Project Emissions (PE2) (C-2106-189-0)						
Pollutant	**Emissions Factor (g/bhp-hr)**	**Rating (bhp)**	**Daily Hours of Operation (hrs/day)**	**Annual Hours of Operation (hrs/year)**	**Daily PE2 (lb/day)**	**Annual PE2 (lb/year)**
NO_x	3.93	460	24	50	**95.7**	**199**
SO_x	0.0051	460	24	50	**0.1**	**0**
PM_{10}	0.04	460	24	50	**1.0**	**2**
CO	0.52	460	24	50	**12.7**	**26**
VOC	0.21	460	24	50	**5.1**	**11**

Post Project Emissions (PE2) (C-2106-190-0)						
Pollutant	**Emissions Factor (g/bhp-hr)**	**Rating (bhp)**	**Daily Hours of Operation (hrs/day)**	**Annual Hours of Operation (hrs/year)**	**Daily PE2 (lb/day)**	**Annual PE2 (lb/year)**
NO_x	3.43	197	24	50	**35.8**	**74**
SO_x	0.0051	197	24	50	**0.1**	**0**
PM_{10}	0.08	197	24	50	**0.8**	**2**
CO	1.42	197	24	50	**14.8**	**31**
VOC	0.18	197	24	50	**1.9**	**4**

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 (ATCs) or Permits to Operate (PTOs) at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

SSPE1 is summarized in the following table. See Appendix F for detailed SSPE calculations.

SSPE1 (lb/year)					
	NO_X	**SO_X**	**PM_{10}**	**CO**	**VOC**
SSPE1	955,413	196,129	238,353	3,118,492	546,621

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

Pursuant to District Rule 2201, the Post-Project Stationary Source Potential to Emit (SSPE2) is the PE from all units with valid ATCs or PTOs, except for emissions units proposed to be shut down as part of the Stationary Project, at the Stationary Source and the quantity of 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.

For this project the change in emissions for the facility is due to the installation of the new emergency standby IC engines. Thus:

SSPE2 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
SSPE1	955,413	196,129	238,353	3,118,492	546,621
C-2106-188-0	583	1	1	59	30
C-2106-189-0	199	0	2	26	11
C-2106-190-0	74	0	2	31	4
SSPE2	**956,269**	**196,130**	**238,358**	**3,118,608**	**546,666**

5. Major Source Determination

Rule 2201 Major Source Determination:

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

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NO_X	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**VOC**
SSPE1	955,413	196,129	238,353	238,353	3,118,492	546,621
SSPE2	956,269	196,130	238,358	238,358	3,118,608	546,666
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	Yes	Yes	Yes	Yes	Yes	Yes

As seen in the table above, the facility is an existing Major Source and is remaining a Major Source as a result of this project.

Rule 2410 Major Source Determination:

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

PSD Major Source Determination (tons/year)						
	NO_2	VOC	SO_2	CO	PM	PM_{10}
Estimated Facility PE before Project Increase	478	273	98	1,559	119	119
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	Y	Y	N	Y	N	N

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

6. Baseline Emissions (BE)

BE = Pre Project Potential to Emit for:

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

otherwise,

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

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

7. SB 288 Major Modification

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

Since this facility is a major source for all pollutants, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	**Project PE2 (lb/year)**	**Threshold (lb/year)**	**SB 288 Major Modification Calculation Required?**
NO_x	856	50,000	No
SO_x	1	80,000	No
PM_{10}	5	30,000	No
VOC	45	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.

8. Federal Major Modification

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

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

Step 1

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

The project's combined total emission increases were calculated in this document above. Per the District's draft policy titled *Implementation of Rule 2201 (as amended on 12/18/08 and effective on 6/10/10) for SB288 and Federal Major Modifications*, a permitting action is a Federal Major Modification if it will result in an increase in emissions in excess of the thresholds specified in section 3.18 of Rule 2201 (see Federal Major Modification Thresholds for Emission Increases table below). The draft policy further states that if the emission increases are less than or equal to 0.5 lb/day, on an average basis, then they are to be rounded to zero (consistent with District Policy APR-1130).

As shown in section VII.C.2 of this document, the total annual potential to emit for NO_x, SO_x, PM_{10} and VOC emissions are 856 lb-NO_x/year, 1 lb-SO_x/year, 5 lb-PM_{10}/year, and 45 lb-VOC/year respectively. Therefore, the average daily emission rates can be determined using the annual potential to emit divided by a worst case operating scenario of 365 days per year.

Average Daily PE2 = Annual PE / 365 days/year

C-2106-188-0

Pollutant	Annual PE (lb/year)	Worst Case Operation (days/year)	Average Daily PE (lb/day)
NO_X	583	365	1.6
VOC	30	365	0.1
PM_{10}	1	365	0.0
SOx	1	365	0.0

As explained above, in accordance with District Policy APR-1130, the PE2 is less than or equal to 0.5 lb/day and therefore rounds to zero for VOC, PM_{10}, and SO_x.

C-2106-189-0

Pollutant	Annual PE (lb/year)	Worst Case Operation (days/year)	Average Daily PE (lb/day)
NO_X	199	365	0.5
VOC	11	365	0.0
PM_{10}	2	365	0.0
SOx	0	365	0.0

As explained above, in accordance with District Policy APR-1130, the PE2 is less than or equal to 0.5 lb/day and therefore rounds to zero for each of these pollutants.

C-2106-190-0

Pollutant	Annual PE (lb/year)	Worst Case Operation (days/year)	Average Daily PE (lb/day)
NO_X	74	365	0.2
VOC	4	365	0.0
PM_{10}	2	365	0.0
SOx	0	365	0.0

As explained above, in accordance with District Policy APR-1130, the PE2 is less than or equal to 0.5 lb/day and therefore rounds to zero for each of these pollutants.

The following table compares the project emissions increases to the Federal Major Modification thresholds and determines if the project is a Federal Major Modification.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/year)	Thresholds (lb/year)	Federal Major Modification?
NO_x	583	0	Yes
VOC	0	0	No
PM_{10}	0	30,000	No
$PM_{2.5}$	0	20,000	No
SO_x	0	80,000	No

Since there is an increase in NO_x emissions from ATC C-2106-188-0, this project constitutes a Federal Major Modification for NO_x emissions. Federal Offset quantities are calculated below.

Federal Offset Quantities:

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

NOx **Federal Offset Ratio** **1.5**

Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
C-2106-188-0	0	583	**583**
C-2106-189-0	0	199	**199**
C-2106-190-0	0	74	**74**
		Net Emission Change (lb/year):	**856**
		Federal Offset Quantity: (NEC * 1.5)	**1,284**

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)

- NO_2 (as a primary pollutant)

- SO_2 (as a primary pollutant)
- CO
- PM
- PM_{10}

I. Project Location Relative to Class 1 Area

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

II. Project Emission Increase – Significance Determination

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

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

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO_2	SO_2	CO	PM	PM_{10}
Total PE from New and Modified Units	0.43	0.00	0.06	0.00	0.00
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	N	N	N	N	N

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

10. Quarterly Net Emissions Change (QNEC)

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

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following[1]:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

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

The daily emissions from the new engines are compared to the BACT threshold levels in the following tables:

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

ATC C-2106-188-0

New Emissions Unit BACT Applicability				
Pollutant	**Daily Emissions for the new unit (lb/day)**	**BACT Threshold (lb/day)**	**SSPE2 (lb/yr)**	**BACT Triggered?**
NO_X	279.6	> 2.0	n/a	Yes
SO_X	0.3	> 2.0	n/a	No
PM_{10}	0.6	> 2.0	n/a	No
CO	28.4	> 2.0 and SSPE2 ≥ 200,000 lb/yr	3,118,608	Yes
VOC	14.5	> 2.0	n/a	Yes

As shown above, BACT is triggered for NO_X, CO, and VOC emissions from the engine (ATC C-2106-188-0).

C-2106-189-0

New Emissions Unit BACT Applicability				
Pollutant	**Daily Emissions for the new unit (lb/day)**	**BACT Threshold (lb/day)**	**SSPE2 (lb/yr)**	**BACT Triggered?**
NO_X	95.7	> 2.0	n/a	Yes
SO_X	0.1	> 2.0	n/a	No
PM_{10}	1.0	> 2.0	n/a	No
CO	12.7	> 2.0 and SSPE2 ≥ 200,000 lb/yr	3,118,608	Yes
VOC	5.1	> 2.0	n/a	Yes

As shown above, BACT is triggered for NO_X, CO, and VOC emissions from the engine (ATC C-2106-189-0).

C-2106-190-0

New Emissions Unit BACT Applicability				
Pollutant	**Daily Emissions for the new unit (lb/day)**	**BACT Threshold (lb/day)**	**SSPE2 (lb/yr)**	**BACT Triggered?**
NO_X	35.8	> 2.0	n/a	Yes
SO_X	0.1	> 2.0	n/a	No
PM_{10}	0.8	> 2.0	n/a	No
CO	14.8	> 2.0 and SSPE2 ≥ 200,000 lb/yr	3,118,608	Yes
VOC	1.9	> 2.0	n/a	No

As shown above, BACT is triggered for NO_x and CO emissions from the engine (ATC C-2106-190-0).

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

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

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

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

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does constitute an SB 288 and/or Federal Major Modification for NO_x emissions. Therefore BACT is triggered for NO_x for all emissions units in the project for which there is an emission increase.

2. BACT Guideline

BACT Guideline 3.1.1, which appears in Appendix B of this report, covers diesel-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, which appears in Appendix B of this report, BACT is satisfied with:

NO_x: Latest Available Tier Certification level for applicable horsepower*
CO: Latest Available Tier Certification level for applicable horsepower*
VOC: Latest Available Tier Certification level for applicable horsepower*

*Note: The certification requirements for emergency engines are as follows: $50 \leq bhp < 75$ – Tier 4I; $75 \leq bhp < 750$ – Tier 3; ≥ 750 bhp – Tier 2.

The facility has proposed to install a 1,193 bhp Tier 2 certified IC engine a 460 bhp Tier 3 certified IC engine and a 197 bhp Tier 3 certified IC engine. Therefore, BACT is satisfied for NO_x, CO, and VOC.

B. Offsets

1. Offset Applicability

Pursuant to Section 4.6.2 of this rule, offsets are not required for emergency IC engines. Each engine in this project is an emergency IC engine; therefore, this exemption is applicable to this project.

However, even when there is an applicable exemption, the SSPE2 values are compared to the offset threshold to determine if offsets are triggered. In its PAS database, the District keeps track of facilities where offsets are triggered but an exemption applies. The SSPE2 values are compared to the offset trigger thresholds in the following table:

Offset Determination (lb/year)					
	NOx	**SOx**	**PM_{10}**	**CO**	**VOC**
SSPE2	956,269	196,130	238,358	3,118,608	546,666
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets Triggered?	Yes	Yes	Yes	Yes	Yes

2. Quantity of Offsets Required

As shown in the table above, offsets are triggered for NO_x, SO_x, PM_{10}, CO and VOC emissions since the NO_x, SO_x, PM_{10}, CO and VOC SSPE2 exceeds the offset trigger threshold; however, as previously discussed, the offset exemption from Section 4.6.2 of District Rule 2201 is applicable to this project; therefore, offset calculations are not necessary and offsets are not required.

C. Public Notification

1. Applicability

Public noticing is required for:

a. New Major Sources, SB288 Major Modifications, and Federal Major Modifications

As shown in Sections VII.C.5, VII.C.7, and VII.C.8, this facility is not a new Major Source, not an SB 288 Major Modification, and is a Federal Major

Modification, respectively. Therefore, Public Noticing is required for Federal Major Modification purposes.

b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant

As calculated in Section VII.C.2, daily emissions for NO_X for unit C-2106-188-0 are greater than 100 lb/day. Therefore, Public Noticing is required for a new emissions unit with a Potential to Emit greater than 100 pounds during any one day.

c. Any project which results in the offset thresholds being surpassed

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

Offset Thresholds				
Pollutant	**SSPE1 (lb/year)**	**SSPE2 (lb/year)**	**Offset Threshold**	**Public Notice Required?**
NO_X	955,413	956,269	20,000 lb/year	No
SO_X	196,129	196,130	54,750 lb/year	No
PM_{10}	238,353	238,358	29,200 lb/year	No
CO	3,118,492	3,118,608	200,000 lb/year	No
VOC	546,621	546,666	20,000 lb/year	No

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

d. Any project with a Stationary Source Project Increase in Permitted Emissions (SSIPE) greater than 20,000 lb/year for any pollutant

For this project, the proposed engines are the only emission units that will generate an increase in Potential to Emit. Since the proposed engine emissions are well below 20,000 lb/year for all pollutants (See Section VII.C.2), the SSIPE for this project will be below the public notice threshold. Therefore public noticing is not required for SSIPE greater then 20,000 lb/year purposes.

e. Any project which results in a Title V significant permit modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V significant modification. Therefore, public noticing for Title V significant modifications is required for this project.

2. Public Notice Action

As demonstrated above, this project will require public noticing since it is a Federal Major Modification, daily emissions for NOx for unit C-2106-188-0 are greater than 100 lb/day and the project results in a Title V significant permit modification. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emissions Limits

Daily Emissions Limitations (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. Therefore, the following conditions will be listed on each ATC as a mechanism to ensure compliance:

C-2106-188-0

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 4.43 g-NOx/bhp-hr, 0.45 g-CO/bhp-hr, or 0.23 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

- {4772} Emissions from this IC engine shall not exceed 0.01 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

- {modified 4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

C-2106-189-0

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 3.93 g-NOx/bhp-hr, 0.52 g-CO/bhp-hr, or 0.21 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

- {4772} Emissions from this IC engine shall not exceed 0.04 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

- {modified 4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

C-2106-190-0

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 3.43 g-NOx/bhp-hr, 1.42 g-CO/bhp-hr, or 0.18 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

- {4772} Emissions from this IC engine shall not exceed 0.08 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

- {madified 4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

The owner/operator will be required to monitor the number of hours the engine operates for emergency and nonemergency purposes for compliance with Rule 2201. The following condition will be included on the ATC as a mechanism to enforce compliance.

- This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours. [District Rules 2201 and 4702, and 17 CCR 93115]

3. Recordkeeping

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

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

- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201 and 4702, and 17 CCR 93115]

4. Reporting

No reporting is required to ensure compliance with District Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

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

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

The proposed location is in a non-attainment area for the state's PM_{10} as well as federal and state $PM_{2.5}$ thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM_{10} and $PM_{2.5}$.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Federal Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, this project does constitute a Federal Major Modification, therefore this requirement is applicable. Naval Air Station Lemoore's compliance certification is included in Appendix G.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install three diesel-fired emergency standby IC engines powering electrical generators.

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

Rule 2410 Prevention of Significant Deterioration

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

Rule 2520 Federally Mandated Operating Permits

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

A minor permit modification is a permit modification that does not meet the definition of modification as given in Section 111 or Section 112 of the Federal Clean Air Act. Since this project involves the installation of a new emission unit that is subject to an NSPS requirement, the proposed project is considered to be a modification under the Federal Clean Air Act. As a result, the proposed project constitutes a Significant Modification to the Title V Permit.

As discussed above, the facility has applied for a Certificate of Conformity (COC). Therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued. The following conditions will be included on the ATC to ensure compliance with the requirements of this rule

- {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)

40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

§60.4200 - Applicability

This subpart is applicable to owners and operators of stationary compression ignited internal combustion engines that commence construction after July 11, 2005, where the engines are:

1) Manufactured after April 1, 2006, if not a fire pump engine.
2) Manufactured as a National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

Since the proposed engines will be installed after July 11, 2005 and will be manufactured after April 1, 2006, this subpart applies.

Sections 60.4201 through 60.4203 apply to engine manufacturers. Therefore, these sections will not be discussed unless they are referenced later by another section of this subpart.

§60.4204 – Emission Standards for Owners and Operators

Section 60.4205(b) states that owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in Section 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

Section 60.4202(a) states that Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

Section (a)(1) is not applicable as it applies to engines with a maximum engine power less than 37 KW (50 HP).

Section (a)(2) states for engines greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

The applicable standards from 40 CFR 89.112 are NMHC + NOx = 6.4 g/kw-hr, CO = 3.5 g/kw-hr, and PM = 0.20 g/kw-hr. As demonstrated in Section VII.B above, the emission standards of 40 CFR 89.112 are met. Therefore, the previously proposed conditions will ensure compliance with this requirement:

C-2106-188-0

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 4.43 g-NOx/bhp-hr, 0.45 g-CO/bhp-hr, or 0.23 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

- {4772} Emissions from this IC engine shall not exceed 0.01 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

C-2106-189-0

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 3.93 g-NOx/bhp-hr, 0.52 g-CO/bhp-hr, or 0.21 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

- {4772} Emissions from this IC engine shall not exceed 0.04 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

C-2106-190-0

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 3.43 g-NOx/bhp-hr, 1.42 g-CO/bhp-hr, or 0.18 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

- {4772} Emissions from this IC engine shall not exceed 0.08 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

The smoke emission standard in 40 CFR 89.113 applies to compression-ignition non-road engines. An emergency-standby IC engine is not a non-road engine as defined in 40 CFR 89 Subpart A, therefore section 40 CFR 89.113 does not apply.

Section 60.4206 states that owners or operators of CI engines must meet the applicable emission standards for the entire life of said engines. The Tier 3 level emissions for the proposed engine will be listed on the permit as emission factors, ensuring that the emission standards are met over the entire life of the engine.

Section 60.4207(b) states that beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. Section 80.510(b) states that beginning June 1, 2010, except as otherwise specifically provided in this subpart, the sulfur content for all non-road diesel fuel shall not exceed 15 ppm. The proposed engine will be required by the following permit condition to use CARB certified diesel fuel, which meets all of the fuel requirements listed in Subpart IIII.

- {modified 4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

Section 60.4208 lists deadline dates for importing or installing stationary CI engines produced in the previous model year. None of the deadline dates affect the engine proposed in this project. Therefore, this section does not apply.

Section 60.4209 applies to emergency stationary CI engines that do not meet the applicable standards and stationary CI engines equipped with a diesel particulate filter. The proposed engine in this project does not fall under either of these two categories. Therefore, this section does not apply.

Section 60.4210 applies only to engine manufacturers. Therefore, this section will not be discussed unless it is referenced later by another section of this subpart.

Section 60.4211(a) states that owners or operators who comply with the emission standards specified in this subpart must operate and maintain the stationary CI engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. The following condition will be added to the ATC to ensure compliance:

- {modified 4261} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR Part 60 Subpart IIII]

Section 60.4211(b) applies to pre-2007 model year engines. Therefore, this section does not apply.

Section 60.4211(c) states that if you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in Section 60.4204(b) or Section 60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in Section 60.4205(c), you must comply by purchasing an engine certified to the emission standards in Section 60.4204(b), or Section 60.4205(b) or (c), as applicable, for the same model year and maximum (or in

the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications. The applicant has proposed Tier 2 and Tier 3 emissions level engines in this project that comply with the emission standards in Section 60.4205(b) and will be installed according to the manufacturer's specifications. Therefore, this section is satisfied.

Section 60.4211(d) applies to owners or operators who must comply with the emission standards specified in Section 60.4204(c) or Section 60.4205(d). The proposed engines are not subject to the emission standards specified in Sections 60.4204(c) or 60.4205(d). Therefore, this section does not apply.

Section 60.4211(e) applies to owners or operators of modified or reconstructed stationary CI internal combustion engines. The engines in this project are new, therefore, this section does not apply.

Section 60.4211(f) applies to owners or operators of an emergency stationary ICE. This section states you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. The following condition will be added to each ATC to ensure compliance:

- {modified 4920} 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

Section 60.4212 applies to owners or operators of a stationary CI engine with a displacement of less than 30 liters per cylinder and required to conduct performance tests pursuant to Section 60.4211(b). Section 60.4211(b) does not apply to this engine. Therefore, performance tests are not required and this section does not apply.

Section 60.4213 applies to owners or operators of CI engines with a displacement of greater than or equal to 30 liters per cylinder. The displacement is less than 30 liters per cylinder for each of these engines, therefore, this section does not apply.

Section 60.4214(a) states owners and operators of non-emergency stationary CI engines that are greater than 3,000 hp, or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 175 hp and

not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section. Each of the proposed engines is a post-2007 model year emergency engine rated less than 3,000 hp and has a displacement less than 10 liters per cylinder. Therefore, this section does not apply.

Section 60.4214(b) states that if the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. Since each engine in this project meets the applicable standards, this section does not apply.

Section 60.4214(c) applies to stationary CI engines equipped with a diesel particulate filter. The engines in this project do not have a diesel particulate filter, therefore, this section does not apply.

Sections 60.4215 and 60.4216 apply to engines operated outside the continental United States. Therefore, these sections do not apply.

Section 60.4217 applies to engines that use special fuels and cannot meet the emission limits that the engine was originally certified to. This section does not apply as the proposed engines are diesel-fired and each engine meets the emission limits that the engine was originally certified to.

As demonstrated above, each proposed engine meets the requirements of this subpart.

Rule 4002 National Emission Standards for Hazardous Air Pollutants

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

In accordance with Section 63.6590(c) each engine in this project must meet the requirements of 40 CFR 63, Subpart ZZZZ, by meeting the requirements of 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*. No further requirements apply.

As demonstrated above the proposed engines meet the requirements of 40 CFR 60 Subpart IIII. Therefore the engines meet the requirements of 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 each ATC 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. Therefore, the following condition will be listed on each ATC 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 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (Appendix D), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

RMR Summary						
Units	**Prioritization Score**	**Acute Hazard Index**	**Chronic Hazard Index**	**Maximum Individual Cancer Risk**	**T-BACT Required?**	**Special Permit Requirements?**
C-2106-188-0	N/A[1]	N/A[2]	0.00	1.39E-09	No	Yes
C-2106-189-0	N/A[1]	N/A[2]	0.00	6.79E-09	No	Yes
C-2106-190-0	N/A[1]	N/A[2]	0.00	1.54E-08	No	Yes
Project Totals	N/A[1]	0.0	0.0	2.36E-08		
Facility Totals	>1	0.00	0.00	6.94E-06		

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

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

Discussion of T-BACT

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

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

The following conditions will be listed on each ATC as shown, as a mechanism to ensure compliance with the RMR:

All Units

- {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]

- {4920} 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

C-2106-188-0

- {4772} Emissions from this IC engine shall not exceed 0.01 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

C-2106-189-0

- {4772} Emissions from this IC engine shall not exceed 0.04 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

C-2106-190-0

- {4772} Emissions from this IC engine shall not exceed 0.08 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

Rule 4201 Particulate Matter Concentration

Rule 4201 limits particulate matter emissions from any single source operation to 0.1 g/dscf, which, as calculated below, is equivalent to a PM_{10} emission factor of 0.4 g-PM_{10}/bhp-hr.

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

Each of the new engines has a PM_{10} emission factor less than 0.4 g/bhp-hr. Therefore, compliance is expected and the following condition will be listed on each ATC as a mechanism to ensure compliance:

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

Rule 4701 Internal Combustion Engines - Phase 1

The purpose of this rule is to limit the emissions of nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines. Except as provided in Section 4.0, the provisions of this rule apply to any internal combustion engine, rated greater than 50 bhp, that requires a PTO.

The proposed engines are 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

Emergency standby engines are subject to District Rule 4702 requirements. Emergency standby engines are defined in Section 3.0 of District Rule 4702 as follows:

> *3.15 Emergency Standby Engine: 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.

Emergency standby engines cannot be used to reduce the demand for electrical power when normal electrical power line service has not failed, or to produce power for the electrical distribution system, or in conjunction with a voluntary utility demand reduction program or interruptible power contract. The following conditions will be included on each permit:

- {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702 and 17 CCR 93115]

- {3808} 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 and 17 CCR 93115]

Operation of emergency standby engines is limited to 100 hours or less per calendar year for non-emergency purposes. The Air Toxic Control Measure for Stationary Compression Ignition Engines (Stationary ATCM) limits this engine's maintenance and testing to 50 hours/year; however, if the PM emissions rate is less than or equal to 0.01 g/bhp-hr, the engine may be operated up to 100 hours/year for maintenance and testing if no other requirements restrict operation to fewer hours per year. C-2106-188 has PM emissions less than 0.01 g/bhp, however 40 CFR Part 60 Subpart IIII restricts emergency standby engines to 50 hours per year of operation for maintenance and testing purposes therefore, compliance is expected. The following condition will be included on each permit:

- {4920} 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

The following exemption in Section 4.2 of District Rule 4702 applies to emergency standby engines:

4.2 Except for the requirements of Section 5.9 and Section 6.2.3, the requirements of this rule shall not apply to:
4.2.1 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.

Pursuant to the exemption in Section 4.2, the following requirements of Section 5.9 are applicable to emergency standby engines

Section 5.9 requires the owner to:

5.9.2 Properly operate and maintain each engine as recommended by the engine manufacturer or emission control system supplier.

5.9.3 Monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier.

5.9.4 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 Permit-Exempt 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.

Properly operate and maintain each engine as recommended by the engine manufacturer or emission control system supplier. The following condition will be included on each permit:

- {modified 4261} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR Part 60 Subpart IIII]

Monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier. The following condition will be included on each permit:

- {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]

Install and operate a nonresettable elapsed time meter. In lieu of installing a nonresettable elapsed time meter, the operator may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO and EPA and is allowed by Permit-to-Operate condition. The operator shall properly maintain and operate the nonresettable elapsed time meter or alternative device in accordance with the manufacturer's instructions. The following condition will be included on each permit:

- {4749} This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours. [District Rule 4702 and 17 CCR 93115]

The exemption in Rule 4702 Section 4.2 for emergency standby engines requires the engines to comply with Section 6.2.3, shown below.

> *6.2.3 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 provided to the APCO upon request. The records shall include, but are not limited to, the following:*
>
> > *6.2.3.1 Total hours of operation,*
> > *6.2.3.2 The type of fuel used,*
> > *6.2.3.3 The purpose for operating the engine,*
> > *6.2.3.4 For emergency standby engines, all hours of non-emergency and emergency operation shall be reported, and*
> > *6.2.3.5 Other support documentation necessary to demonstrate claim to the exemption.*

Records of the total hours of operation, type of fuel used, purpose for operating the engine, all hours of non-emergency and emergency operation, and other support documentation must be maintained. All records shall be retained for a period of at least five years, shall be readily available, and be made available to the APCO upon request. The following conditions will be included on each permit:

- {3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator

may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]

- {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]

- {3475} 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 and 17 CCR 93115]

Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO_2) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

Volume SO_2 = (n x R x T) ÷ P
n = moles SO_2
T (standard temperature) = 60 °F or 520 °R
R (universal gas constant) = $\frac{10.73\,\text{psi}\cdot\text{ft}^3}{\text{lb}\cdot\text{mol}\cdot{}^\circ\text{R}}$

$$\frac{0.000015\,lb-S}{lb-fuel}\times\frac{7.1\,\text{lb}}{\text{gal}}\times\frac{64\,\text{lb}-SO_2}{32\,\text{lb}-S}\times\frac{1\,\text{MMBtu}}{9{,}051\,\text{scf}}\times\frac{1\,\text{gal}}{0.137\,\text{MMBtu}}\times\frac{\text{lb}-\text{mol}}{64\,\text{lb}-SO_2}\times\frac{10.73\,\text{psi}-\text{ft}^3}{\text{lb}-\text{mol}-{}^\circ\text{R}}\times\frac{520{}^\circ\text{R}}{14.7\,\text{psi}}\times 1{,}000{,}000 = 1.0\ \text{ppmv}$$

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

- {modified 4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

California Health & Safety Code 42301.6 (School Notice)

The District has verified that these engines are 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.

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

The following requirements apply to new engines (those installed after 1/1/05):

Title 17 CCR Section 93115 Requirements for New Emergency IC Engines Powering Electrical Generators	Proposed Method of Compliance with Title 17 CCR Section 93115 Requirements
Emergency engine(s) must be fired on CARB diesel fuel, or an approved alternative diesel fuel.	The applicant has proposed the use of CARB certified diesel fuel. The proposed permit condition, requiring the use of CARB certified diesel fuel, is included on each permit. • {modified 4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]
The engine(s) must meet the emission standards in Table 1 of the ATCM for the specific power rating and model year of the proposed engine.	The applicant has proposed the use of engines that are certified to the latest EPA Tier Certification standards for the applicable horsepower range, guaranteeing compliance with the emission standards of the ATCM. Additionally, the proposed diesel PM emission rates are less than or equal to 0.15 g/bhp-hr.
The engine may not be operated more than 50 hours per year for maintenance and testing purposes unless the PM emissions are ≤ 0.01 g/bhp-hr, then the engine is allowed 100 hours per year unless an appliciable regulation has a different requirement. Emissions from unit C-2106-188-0 are certified at 0.01 g/bhp-hr, therefore the engine is allowed 100 hours according to the ATCM, however 40 CFR Part 60 Subpart IIII requires emergency standby engines to operate less than 50 hours per year for maintenance and testing.	The following conditions will be included on each permit: C-2106-188 • {4772} Emissions from this IC engine shall not exceed 0.01 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] • {4920} 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] C-2106-189-0 • {4772} Emissions from this IC engine shall not exceed 0.04 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] • {4920} 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] C-2106-190-0 • {4772} Emissions from this IC engine shall not exceed 0.08 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] • {4920} 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]
Engines, with a PM10 emissions rate greater than 0.01 g/bhp-hr and located at schools, may not be operated for maintenance and testing whenever there is a school sponsored activity on the grounds. Additionally, engines located within 500 feet of school grounds may not be operated for maintenance and testing between 7:30 AM and 3:30 PM	The District has verified that these engines are not located within 500' of a school.
A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed upon engine installation, or by no later than January 1, 2005, on all engines subject to all or part of the requirements of sections 93115.6, 93115.7, or 93115.8(a) unless the District determines on a case-by-case basis that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history.	The following condition will be included on each permit: • {4749} This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours. [District Rule 4702 and 17 CCR 93115]
An owner or operator shall maintain monthly records of the following: emergency use hours of operation; maintenance and testing hours of operation; hours of operation for emission	The following condition will be included on each permit: • {3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency

testing; initial start-up testing hours; hours of operation for all other uses; and the type of fuel used. All records shall be retained for a minimum of 36 months.	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 and 17 CCR 93115]

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.

Greenhouse Gas (GHG) Significance Determination

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

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

located, would be determined to have a less than significant individual and cumulative impact for GHG emission.

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

Under District policy APR 2025, *CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation*, the District finds that the Cap-and-Trade is a regulation plan approved by ARB, consistent with AB32 emission reduction targets, and supported by a CEQA compliant environmental review document. As such, consistent with District Policy 2005, projects complying with Cap-and-Trade requirements are determined to have a less than significant individual and cumulative impact for GHG emissions.

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

District CEQA Findings

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

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement

and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Pending a successful NSR public noticing period, issue Authorities to Construct C-2106-188-0, C-2106-189-0 and C-2106-190-0 subject to the permit conditions on the attached draft ATCs in Appendix A.

X. Billing Information

Billing Schedule			
Permit Number	**Fee Schedule**	**Fee Description**	**Fee Amount**
C-2106-188-0	3020-10-F	1,193 bhp IC engine	$820
C-2106-189-0	3020-10-D	460 bhp IC engine	$525
C-2106-190-0	3020-10-B	197 bhp IC engine	$129

Appendixes

A. Draft ATC
B. BACT Guideline and BACT Analysis
C. EPA Certification
D. RMR and AAQA
E. QNEC Calculations
F. SSPE1 Calculations
G. Compliance Certification

Appendix A
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-2106-188-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: NAS LEMOORE
MAILING ADDRESS: BUILDING 750 CODE 50800
LEMOORE, CA 93246-5001

LOCATION: NAVAL AIR STATION LEMOORE
750 ENTERPRISE AVE
LEMOORE, CA 93246-5001

EQUIPMENT DESCRIPTION:
1,193 BHP (INTERMITTENT) MTU MODEL 12V 2000 G85 TB TIER 2 CERTIFIED DIESEL-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. 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
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

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.

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061

8. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

9. Emissions from this IC engine shall not exceed any of the following limits: 4.43 g-NOx/bhp-hr, 0.45 g-CO/bhp-hr, or 0.23 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

10. Emissions from this IC engine shall not exceed 0.01 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

11. 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 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

12. 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

13. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

14. 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 and 17 CCR 93115] Federally Enforceable Through Title V Permit

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

16. 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

17. The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

18. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201 and 4702, and 17 CCR 93115] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-2106-189-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: NAS LEMOORE
MAILING ADDRESS: BUILDING 750 CODE 50800
LEMOORE, CA 93246-5001

LOCATION: NAVAL AIR STATION LEMOORE
750 ENTERPRISE AVE
LEMOORE, CA 93246-5001

EQUIPMENT DESCRIPTION:
460 BHP (INTERMITTENT) MTU MODEL 6R1600G80S TIER 3 CERTIFIED DIESEL-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. 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
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

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.

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

C-2106-189-0 : Dec 19 2017 4:43PM -- OGDENA : Joint Inspection NOT Required

8. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

9. Emissions from this IC engine shall not exceed any of the following limits: 3.93 g-NOx/bhp-hr, 0.52 g-CO/bhp-hr, or 0.21 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

10. Emissions from this IC engine shall not exceed 0.04 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

11. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

12. 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

13. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

14. 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 and 17 CCR 93115] Federally Enforceable Through Title V Permit

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

16. 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

17. The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

18. 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 2201and 4702, and 17 CCR 93115] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-2106-190-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: NAS LEMOORE
MAILING ADDRESS: BUILDING 750 CODE 50800
LEMOORE, CA 93246-5001

LOCATION: NAVAL AIR STATION LEMOORE
750 ENTERPRISE AVE
LEMOORE, CA 93246-5001

EQUIPMENT DESCRIPTION:
197 BHP (INTERMITTENT) MERCEDES-BENZ MODEL OM924LA TIER 3 CERTIFIED DIESEL-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. 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
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

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.

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

C-2106-190-0 : Dec 19 2017 4:43PM -- OGDENA : Joint Inspection NOT Required

8. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

9. Emissions from this IC engine shall not exceed any of the following limits: 3.43 g-NOx/bhp-hr, 1.42 g-CO/bhp-hr, or 0.18 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

10. Emissions from this IC engine shall not exceed 0.08 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

11. 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 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

12. 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

13. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

14. 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 and 17 CCR 93115] Federally Enforceable Through Title V Permit

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

16. 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

17. The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

18. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201 and 4702, and 17 CCR 93115] Federally Enforceable Through Title V Permit

Appendix B
BACT Guideline and BACT Analysis

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.1.1
Last Update: 9/10/2013
Emergency Diesel IC Engine

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

*Note: The certification requirements are as follows: for emergency engines $50 \leq$ bhp < 75 - Tier 4 Interim; for emergency engines $75 \leq$ bhp < 750 - Tier 3; for emergency engines ≥ 750 bhp - Tier 2.

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.

Top Down BACT Analysis for the Emergency IC Engine

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

1. BACT Analysis for NO_X, CO and VOC Emissions:

a. Step 1 - Identify all control technologies

BACT Guideline 3.1.1 identifies only the following option:

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

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

- 40 CFR Part 89 – Control of Emissions from New and In-Use Nonroad Compression – Ignition Engines
- 40 CFR Part 1039 – Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines
- Title 17 CCR, Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

40 CFR Parts 89 and 1039, which apply only to nonroad engines, do not directly apply because the proposed emergency engine does not meet the definition of a nonroad engine. Therefore, only Title 17 CCR, Section 93115 applies directly to the proposed emergency engine.

Title 17 CCR, Section 93115.6(a)(3)(A) (CARB stationary diesel engine ATCM) applies to emergency standby diesel-fired engines and requires that such engines be certified to the emission levels in Table 1 (below).

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

Therefore, the most stringent applicable emission standards are those listed in the CARB ATCM (Table 1).

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

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

The proposed engines are rated at 460 hp and 197 hp (C-2106-189-0 and '-190-0). Therefore, the applicable control technology option is EPA Tier 3 certification.

The proposed engine is rated at 1,193 hp (C-2106-188-0). Therefore, the applicable control technology option is EPA Tier 2 certification.

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

No ranking needs to be done because there is only one control option listed in Step 1.

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the only control option remaining under consideration. Therefore, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

C-2106-188-0
BACT for NOx, CO, and VOC will be the use of an EPA Tier 2 certified engine. The applicant is proposing such a unit. Therefore, BACT will be satisfied.

C-2106-189-0
BACT for NOx, CO, and VOC will be the use of an EPA Tier 3 certified engine. The applicant is proposing such a unit. Therefore, BACT will be satisfied.

C-2106-190-0
BACT for NOx, and CO will be the use of an EPA Tier 3 certified engine. The applicant is proposing such a unit. Therefore, BACT will be satisfied.

Appendix C
EPA Certifications

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2016 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: MTU America, Inc. (U.S. Manufacturer or Importer) **Certificate Number: GMDDL14.0ZWK-005**	**Effective Date:** 12/14/2015 **Expiration Date:** 12/31/2016	Byron J. Bunker, Division Director Compliance Division	**Issue Date:** 12/14/2015 **Revision Date:** N/A

Model Year: 2016 **Manufacturer Type:** Original Engine Manufacturer **Engine Family:** GMDDL14.0ZWK	**Mobile/Stationary Indicator:** Stationary **Emissions Power Category:** 450<=kW<=560 **Fuel Type:** Diesel **After Treatment Devices:** No After Treatment Devices Installed **Non-after Treatment Devices:** Electronic Control

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2017 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Mercedes Benz**
(U.S. Manufacturer or Importer)

Certificate Number: **HMBXL07.2RJC-004**

Effective Date: 11/17/2016

Expiration Date: 12/31/2017

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 11/17/2016

Revision Date: N/A

Model Year: 2017
Manufacturer Type: Original Engine Manufacturer
Engine Family: HMBXL07.2RJC

Mobile/Stationary Indicator: Stationary
Emissions Power Category: 130<=kW<225
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: No Non-After Treatment Devices Installed

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2017 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: MTU America, Inc.
(U.S. Manufacturer or Importer)

Certificate Number: HMDDL35.8GRR-004

Effective Date: 11/22/2016

Expiration Date: 12/31/2017

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 11/22/2016

Revision Date: N/A

Model Year: 2017
Manufacturer Type: Original Engine Manufacturer
Engine Family: HMDDL35.8GRR

Mobile/Stationary Indicator: Stationary
Emissions Power Category: 560<kW<=2237
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: Electronic Control

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

Appendix D
Technical Services Memo and AAQA

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Andrea Ogden – Permit Services
From:	Seth Lane – Technical Services
Date:	December 5, 2017
Facility Name:	NAS Lemoore
Location:	90 N Street, Lemoore
Application #(s):	C-2106-188-0, 189-0, 190-0
Project #:	C-1173113

A. RMR SUMMARY

RMR Summary						
Units	**Prioritization Score**	**Acute Hazard Index**	**Chronic Hazard Index**	**Maximum Individual Cancer Risk**	**T-BACT Required?**	**Special Permit Requirements?**
Unit 188-0 (1193 BHP DICE)	N/A[1]	N/A[2]	0.00	1.39E-09	No	Yes
Unit 189-0 (460 BHP DICE)	N/A[1]	N/A[2]	0.00	6.79E-09	No	Yes
Unit 190-0 (197 BHP DICE)	N/A[1]	N/A[2]	0.00	1.54E-08	No	Yes
Project Totals	N/A[1]	0.0	0.0	2.36E-08		
Facility Totals	>1	0.00	0.00	6.94E-06		

[1]Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.
[2]Acute Hazard Indices were not calculated since there is no risk factor or the risk factor is so low that it has been determined to be insignificant for this type of unit.

Proposed Permit Requirements

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

Unit # 188-0, 189-0, 190-0

1. The PM10 emissions rate shall not exceed 0.01 g/bhp-hr (Unit 188-0) 0.04 g/bhp-hr (Unit 189-0), or 0.08 g/bhp-hr (Unit 190-0) based on US EPA certification using ISO 8178 test procedure.
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.
3. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year.

B. RMR REPORT

I. Project Description

Technical Services received a request on November 9, 2017, to perform an Ambient Air Quality Analysis and a Risk Management Review for 3 emergency diesel-fired IC engines. One 1,193 bhp Tier 2 certified diesel-fired emergency standby IC engine, one 460 bhp Tier 3 certified diesel-fired emergency standby IC engine, and one 197 bhp Tier 3 certified diesel-fired emergency standby IC engine. Each engine is powering an electrical generator.

II. Analysis

Toxic emissions for this proposed unit were calculated and provided by the processing engineer, and input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0. The prioritization score for this proposed facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required. The AERMOD model was used, with the parameters outlined below and meteorological data for 2011-2013 from Lemoore to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 188-0 (1193 BHP DICE)			
Source Type	Point	**Location Type**	Rural
Stack Height (m)	4.12	**Closest Receptor (m)**	220
Stack Diameter. (m)	0.10	**Type of Receptor**	Business
Stack Exit Velocity (m/s)	357.72	**Max Hours per Year**	50
Stack Exit Temp. (°K)	853.00	**Fuel Type**	DIESEL
PM10 Rate (lb/hr)	0.0	**PM10 Rate (lb/yr)**	1

Analysis Parameters Unit 189-0 (460 BHP DICE)			
Source Type	Point	**Location Type**	Rural
Stack Height (m)	3.05	**Closest Receptor (m)**	220
Stack Diameter. (m)	0.10	**Type of Receptor**	Business
Stack Exit Velocity (m/s)	147.98	**Max Hours per Year**	50
Stack Exit Temp. (°K)	713.00	**Fuel Type**	DIESEL
PM10 Rate (lb/hr)	0.0	**PM10 Rate (lb/yr)**	2

Analysis Parameters Unit 190-0 (197 BHP DICE)			
Source Type	Point	**Location Type**	Rural
Stack Height (m)	2.59	**Closest Receptor (m)**	220
Stack Diameter. (m)	0.10	**Type of Receptor**	Business
Stack Exit Velocity (m/s)	54.08	**Max Hours per Year**	50
Stack Exit Temp. (°K)	742.44	**Fuel Type**	DIESEL
PM10 Rate (lb/hr)	0.0	**PM10 Rate (lb/yr)**	2

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

Unit #	NO_x (Lbs.)		SO_x (Lbs.)		CO (Lbs.)		PM_{10} (Lbs.)	
	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.
188-0	0	583	0	1	0	59	0	1
189-0	0	199	0	0	0	26	0	2
190-0	0	74	0	0	0	31	0	2

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

	Background Site	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Tranquility (2016)	NA[1]	X	NA[1]	X	X
NO_x	Hanford-Irwin (2016)	NA[1]	X	X	X	Pass
SO_x	Fresno – Garland (2016)	NA[1]	NA[1]	X	NA[1]	Pass
PM_{10}	Hanford-Irwin (2016)	X	X	X	NA[1]	Pass[2]
$PM_{2.5}$	Hanford-Irwin (2016)	X	X	X	NA[1]	Pass[3]

*Results were taken from the attached PSD spreadsheet.
[1]The project is an intermittent source as defined in APR-1920. In accordance with APR-1920, compliance with short-term (i.e., 1-hour, 3-hour,8-hour and 24-hour) standards is not required.
[2]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).
[3]The court has vacated EPA's $PM_{2.5}$ SILs. Until such time as new SIL values are approved, the District will use the corresponding PM_{10} SILs for both PM_{10} and $PM_{2.5}$ analyses.

III. Conclusion

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

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

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

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

IV. Attachments

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

Appendix E
QNEC Calculations

Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

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

Since these are new units, PE1 = 0 for all pollutants. Thus, QNEC = PE2 (lb/qtr).

Using the PE2 (lb/yr) values calculated in Section VII.C.2, Quarterly PE2 is calculated as follows: $PE2_{quarterly}$ = PE2 (lb/yr) ÷ 4 quarters/year = QNEC

QNEC		
Pollutant	PE2 Total (lb/yr)	Quarterly PE2 (lb/qtr)
NO_X	583	145.75
SO_X	1	0.25
PM_{10}	1	0.25
CO	59	14.75
VOC	30	7.50

QNEC		
Pollutant	PE2 Total (lb/yr)	Quarterly PE2 (lb/qtr)
NO_X	199	49.75
SO_X	0	0.00
PM_{10}	2	0.50
CO	26	6.50
VOC	11	2.75

QNEC		
Pollutant	PE2 Total (lb/yr)	Quarterly PE2 (lb/qtr)
NO_X	74	18.5
SO_X	0	0.0
PM_{10}	2	0.5
CO	31	7.75
VOC	4	1.0

Appendix F
SSPE1 Calculations

SSPE1 is summarized in the following table. Emissions information comes from project C-1170201, which references projects C-1161131, C-1152887.

Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)						
Permit Unit	NOx	SOx	PM_{10}	CO	VOC	Project #
C-2106-1-3	303	4	21	65	24	C-1152887
C-2106-2-3	466	6	33	100	38	C-1152887
C-2106-6-3	43	1	3	9	3	C-1152887
C-2106-7-3	233	3	17	50	19	C-1152887
C-2106-8-3	84	1	6	18	7	C-1152887
C-2106-9-4	466	6	33	100	38	C-1152887
C-2106-23-4 C-2106-70-5 C-2106-74-4	916,661	195,750	124,611	1,828,504	243,492	C-1152887
C-2106-25-7	8,117	34	409	319,230	3,391	C-1152887
C-2106-26-6	8,117	34	409	319,230	3,391	C-1152887
C-2106-27-6	8,117	34	409	319,230	3,391	C-1152887
C-2106-28-6	8,117	34	409	319,230	3,391	C-1152887
C-2106-39-3	0	0	0	0	14,600	C-1152887
C-2106-69-2	3,139	219	621	11,023	949	C-1152887
C-2106-117-6	0	0	6,034	0	14,130	C-1152887
C-2106-118-6	0	0	6,034	0	14,130	C-1152887
C-2106-119-6	0	0	6,034	0	14,130	C-1152887
C-2106-120-6	0	0	6,034	0	14,130	C-1152887
C-2106-121-6	0	0	6,034	0	14,130	C-1152887
C-2106-122-6	0	0	6,034	0	14,130	C-1152887
C-2106-123-6	0	0	6,034	0	14,130	C-1152887
C-2106-124-6	0	0	6,034	0	14,130	C-1152887
C-2106-125-6	0	0	6,034	0	14,130	C-1152887
C-2106-126-6	0	0	6,034	0	14,130	C-1152887
C-2106-127-6	0	0	6,034	0	14,130	C-1152887
C-2106-140-6	0	0	0	0	730	C-1152887
C-2106-149-2	0	0	2,373	0	16,863	C-1152887
C-2106-151-5	0	0	6,034	0	14,130	C-1152887
C-2106-153-4	0	0	6,034	0	14,130	C-1152887
C-2106-154-4	0	0	6,034	0	14,130	C-1152887
C-2106-155-4	0	0	6,034	0	14,130	C-1152887
C-2106-156-4	0	0	6,034	0	14,130	C-1152887
C-2106-157-4	0	0	6,034	0	14,130	C-1152887
C-2106-162-2	0	0	0	0	365	C-1152887
C-2106-163-2	0	0	0	0	365	C-1152887
C-2106-165-2	0	0	0	0	365	C-1152887

C-2106-167-2	0	0	6,034	0	14,130	C-1152887
C-2106-168-2	546	0	102	546	52	C-1152887
C-2106-170-2	596	3	275	1,013	796	C-1152887
C-2106-174-1	48	0	2	23	3	C-1152887
C-2106-175-0	73	0	0	4	0	C-1152887
C-2106-176-0	73	0	0	4	0	C-1152887
C-2106-183-0	87	0	2	16	3	C-1152887
C-2106-184-0	28	0	1	7	0	C-1161131
C-2106-186-0	99	0	5	90	5	C-1170201
Pre-Project SSPE (SSPE1)	955,413	196,129	238,353	3,118,492	546,621	

Appendix G
Compliance Certification

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[ ] SIGNIFICANT PERMIT MODIFICATION
[X] MINOR PERMIT MODIFICATION

[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: Naval Air Station Lemoore	FACILITY ID: C-2106
1. Type of Organization:[ ] Corporation [ ] Sole Ownership [X] Government [ ] Partnership [ ] Utility	
2. Owner's Name: United States Navy	
3. Agent to the Owner: CDR Nathaniel Straub	

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

(O) 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).

(O) 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.

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

(O) 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.

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

Signature of Responsible Official

25 OCT 2017
Date

CDR Nathaniel Straub
Name of Responsible Official (please print)

Public Works Officer
Title of Responsible Official (please print)