San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JUL 24 2012

Stephen Shehadey
Bar 20 Partners, Ltd.
P O Box 1231
Fresno, CA 93715

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1120769

Dear Mr. Shehadey:

Enclosed for your review and comment is the District's analysis of Bar 20 Partners, Ltd.'s application for Authorities to Construct for the installation of 3 diesel-fired emergency standby IC engines powering electrical generators, at 24387 W. Whitesbridge Rd. in Kerman.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Robert Gilles of Permit Services at (559) 230-5804.

Sincerely,

David Warner
Director of Permit Services

DW:rpg

Enclosures

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)
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www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JUL 24 2012

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1120769

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Bar 20 Partners, Ltd.'s application for Authorities to Construct for the installation of 3 diesel-fired emergency standby IC engines powering electrical generators, at 24387 W. Whitesbridge Rd. in Kerman.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

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Fresno Bee
Fresno Bee

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Bar 20 Partners, Ltd. for the installation of 3 diesel-fired emergency standby IC engines powering electrical generators, at 24387 W. Whitesbridge Rd. in Kerman.

The analysis of the regulatory basis for this proposed action, Project #C-1120769, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**

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

Facility Name:	Bar 20 Partners Ltd.	Date:	July 18, 2012
Mailing Address:	P O Box 1231 Fresno, CA 93715	Engineer	Robert Gilles
		Lead Engineer:	Sheraz Gill
Contact Person:	Stephen Shehadey		
Telephone:	(559) 655-8942		
Application #:	C-5203-17-0, '-18-0, and '-19-0		
Email:	Salrod213@yahoo.com		
Project #:	C-1120769		
Complete:	June 25, 2012		

I. Proposal

Bar 20 Partners Ltd. (Bar 20) is proposing to install 3 diesel-fired emergency standby internal combustion (IC) engines each powering an electrical generator.

Each engine was installed in August of 2005 and required ATC permits prior to installation. The facility is applying for ATCs for these engines as a result of NOV # 41410. Since the engines required ATCs at the time of installation, they are subject to District Rule 2201 *New and Modified Stationary Source Review Rule*.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
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 Stationary Internal Combustion Engines – Phase 1 (8/21/03)
Rule 4702 Stationary Internal Combustion Engines (8/18/11)
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
California Environmental Quality Act (CEQA)
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)

California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The project is located at 24387 W. Whitesbridge Rd. in Kerman, 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

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

V. Equipment Listing

C-5203-17-0: 314 BHP (INTERMITTENT) JOHN DEERE MODEL # 6068HF475 TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE (SERIAL # PE6068H381332) POWERING AN ELECTRICAL GENERATOR (COMMODITY)

C-5203-18-0: 314 BHP (INTERMITTENT) JOHN DEERE MODEL # 6068HF475 TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE (SERIAL # PE6068H516887) POWERING AN ELECTRICAL GENERATOR (SHOP)

C-5203-19-0: 1,495 BHP (INTERMITTENT) DETROIT DIESEL CORPORATION MODEL # R1637M36 TIER 1 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE (SERIAL # 5362003226) POWERING AN ELECTRICAL GENERATOR (MILK BARN)

VI. Emission Control Technology Evaluation

The applicant has proposed to install two Tier 2 and one Tier 1 certified diesel-fired IC engines that are each fired on very low-sulfur diesel fuel (0.0015% by weight sulfur maximum).

The proposed engines meet the Tier Certification requirements for the time of installation; therefore, the engines meet the ARB/EPA emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide for the date that the engines were installed (see Appendix C for a copy of the ARB/EPA executive order).

The use of very low-sulfur 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:	100 hours/year
Density of diesel fuel:	7.1 lb/gal
EPA F-factor (adjusted to 60 °F):	9,051 dscf/MMBtu
Fuel heating value:	137,000 Btu/gal
BHP to Btu/hr conversion:	2,542.5 Btu/bhp-hr
Thermal efficiency of engine:	commonly ≈ 35%
PM_{10} fraction of diesel exhaust:	0.96 (CARB, 1988)

Both engines C-5203-17-0 and '-18-0 have certified NO_X + VOC emissions of 4.33 g/bhp-hr. It will be assumed the NOx + VOC emission factor is split 95% NOx and 5% VOC (per the District's Carl Moyer program).

B. Emission Factors

N-5203-17-0

Emission Factors – C-5203-17-0		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO_X	4.11	ARB Certification
SO_X	0.0051	Mass Balance Equation Below
PM_{10}	0.09	ARB Certification
CO	0.75	ARB Certification
VOC	0.22	ARB Certification

C-5203-18-0

Emission Factors – C-5203-18-0		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO_X	4.11	ARB Certification
SO_X	0.0051	Mass Balance Equation Below
PM_{10}	0.09	ARB Certification
CO	0.67	ARB Certification
VOC	0.22	ARB Certification

C-5203-19-0

Emission Factors – C-5203-19-0		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO_X	5.52	ARB Certification
SO_X	0.0051	Mass Balance Equation Below
PM_{10}	0.06	ARB Certification
CO	0.75	ARB Certification
VOC	0.22	ARB 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 Emissions (PE1)

Since each engine is a new emissions unit, PE1 = 0.

2. Post Project PE (PE2)

The daily and annual PE are calculated as follows:

C-5203-17-0

Daily PE2 – C-5203-17-0				
Pollutant	EF2 (g/bhp-hr)	Rating (bhp)	Daily Operation (hr/day)	Daily PE2 (lb/day)
NOx	4.11	314	24	68.3
SOx	0.0051			0.1
PM_{10}	0.09			1.5
CO	0.75			12.5
VOC	0.22			3.7
Annual PE2				
Pollutant	EF2 (g/bhp-hr)	Rating (bhp)	Annual Operation (hr/day)	Annual PE2 (lb/day)
NOx	4.11	314	100	285
SOx	0.0051			0
PM_{10}	0.09			6
CO	0.75			52
VOC	0.22			15

C-5203-18-0

Daily PE2 – C-5203-18-0				
Pollutant	EF2 (g/bhp-hr)	Rating (bhp)	Daily Operation (hr/day)	Daily PE2 (lb/day)
NOx	4.11	314	24	68.3
SOx	0.0051			0.1
PM_{10}	0.09			1.5
CO	0.67			11.1
VOC	0.22			3.7
Annual PE2				
Pollutant	EF2 (g/bhp-hr)	Rating (bhp)	Annual Operation (hr/day)	Annual PE2 (lb/day)
NOx	4.11	314	100	285
SOx	0.0051			0
PM_{10}	0.09			6
CO	0.67			46
VOC	0.22			15

C-5203-19-0

Daily PE2 – C-5203-19-0				
Pollutant	EF2 (g/bhp-hr)	Rating (bhp)	Daily Operation (hr/day)	Daily PE2 (lb/day)
NOx	5.52	1,495	24	436.6
SOx	0.0051			0.4
PM_{10}	0.06			4.7
CO	0.75			59.3
VOC	0.22			17.4
Annual PE2				
Pollutant	EF2 (g/bhp-hr)	Rating (bhp)	Annual Operation (hr/day)	Annual PE2 (lb/day)
NOx	5.52	1,495	100	1,819
SOx	0.0051			2
PM_{10}	0.06			20
CO	0.75			247
VOC	0.22			73

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

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

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

SSPE1 (lb/year)					
	NOx	SOx	PM_{10}	CO	VOC
SSPE1 Total	**551**	**52**	**151,273**	**168**	**354,671**

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

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

For this project the change in emissions for the facility is due to the installation of the new emergency standby IC engines, permit units -17-0, '-18-0 and '-19-0. Thus:

SSPE2 (lb/year)					
Permit Unit	NOx	SOx	PM_{10}	CO	VOC
SSPE1	**551**	**52**	**151,273**	**168**	**354,671**
C-5203-17-0	285	0	6	52	15
C-5203-18-0	285	0	6	46	15
C-5203-19-0	1,819	2	20	247	73
SSPE2 Total	**2,940**	**54**	**151,305**	**513**	**354,774**

5. 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. However, "for the purposes of determining major source status, the SSPE2 shall not include the quantity of ERCs which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site."

Since emissions at a dairy are not actually collected, a determination of whether emissions could be reasonably collected must be made by the permitting authority. The California Air Pollution Control Association (CAPCOA) prepared guidance in 2005 for estimating potential to emit of Volatile Organic Compounds from dairy farms. The guidance states that *"VOC emissions from the milking centers, cow housing areas, corrals, common manure storage areas, and land application of manure are not physically contained and could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening. No collection technologies currently exist for VOC emissions from these emissions units. Therefore, the VOC emissions from these sources are considered fugitive."*

The guidance also concludes that, because VOC collection technologies do exist for liquid waste systems at dairies, *"... the VOC emissions from waste lagoons and storage ponds are considered non-fugitive."* The District has researched this issue and concurs with the CAPCOA assessment, as discussed in more detail below.

Milking Center: The mechanical system for the milking parlors can be utilized to capture the gases emitted from the milking parlors; however in order to capture all of the gases, and to keep an appropriate negative pressure throughout the system, the holding area would also need to be entirely enclosed. No facility currently encloses the holding area since cows are continuously going in and out of the barn throughout the day. The capital required to enclose this large area would also be significant. Since the holding area is primarily kept open, the District cannot reasonably demonstrate that emissions can pass through a stack, chimney, vent, or other functionally equivalent opening.

Cow Housing: Although there are smaller dairy farms that have partially enclosed freestall barns, these barns are not fully enclosed and none of the barns have been found to vent the exhaust through a collection device. The airflow requirements through dairy barns are extremely high, primarily for herd health purposes. The airflow requirements will be even higher in the San Joaquin valley, where temperatures reach in excess of 110 degrees in the hot summer. Collection and control of the exhaust including the large amounts of airflow have not yet been achieved by any facility. Due to this difficultly, the District cannot reasonably demonstrate that emissions can pass through a stack, chimney, vent, or other functionally equivalent opening.

It must also be noted that EPA has determined that emissions from open-air cattle feedlots are fugitive in nature.[1] In the District's judgment, this determination for emissions from open feedlots necessitates a similar determination for the open-sided freestalls (usually with open access to corrals or pens and free movement of cattle in and out of the covered area) typical of the San Joaquin Valley since the typical open freestall barn in the San Joaquin Valley bears a far greater resemblance to an extensive shade structure located in a large open lot than an actual enclosed building. Therefore, emissions from open freestall barns are most appropriately treated as fugitive.

Manure Storage Areas: Many dairies have been found to cover dry manure piles. Covering dry manure piles is also a mitigation measure included in District Rule 4570. However, the District was not able to find any facility, which currently captures the emissions from the storage or handling of manure piles. Although some of these piles are covered, the emissions cannot reasonably be captured. Therefore, the District cannot reasonably demonstrate that these

[1] Letter from William Wehrum, EPA Acting Administrator, to Terry Stokes, Chief Executive Officer – National Cattlemen's Beef Association (November 2, 2006) (http://www.epa.gov/Region7/programs/artd/air/nsr/nsrmemos/cowdust.pdf)

emissions can pass through a stack, chimney, vent, or other functionally equivalent opening. In addition, emissions from manure piles have been shown to be insignificant in recent studies.

Land Application: Emissions generated from the application of manure on land cannot reasonably be captured due to the extremely large areas, in some cases thousands of acres, of cropland at dairies. Therefore, the District cannot reasonably demonstrate that these emissions can pass through a stack, chimney, vent, or other functionally equivalent opening.

Feed Handling and Storage: The majority of dairies store the silage piles underneath a tarp or in an Ag-bag. The entire pile is covered except for the face of the pile. The face of the pile is kept open due to the continual need to extract the silage for feed purposes. The silage pile is disturbed 2-3 times per day. Because of the ongoing disturbance to these piles, it makes it extremely difficult to design a system to capture the emissions from these piles. In fact, as far as the District is aware, no system has been designed to successfully extract the gases from the face of the pile to capture them, and, as important, no study has assessed the potential impacts on silage quality of a continuous air flow across the silage pile, as would be required by such a collection system. Therefore, the District cannot demonstrate that these emissions can be reasonably expected to pass through a stack, chimney, vent, or other functionally equivalent opening.

As discussed above, the VOC emissions from the milking center, cows housing, manure storage areas, land application of manure and feed handling and storage are considered fugitive. The District has determined that control technology to capture emissions from lagoons (biogas collection systems, for instance) is in use; therefore, these emissions can be reasonably collected and are not fugitive. Therefore, only emissions from the non-fugitive sources, such as lagoons, storage ponds, IC engines, and gasoline tanks, will be used to determine if dairies are major sources.

The emissions for Dairy 1 are calculated as follows:

Lagoon Emissions (Flushed Freestalls & Flushed Corrals)				
Daily Potential to Emit				
Type of Cow	Number of Cows		lb-VOC/hd-yr	lbs-VOC/yr
Milking Cow	2,904	x	1.05	3049
Dry Cow	443	x	0.58	257
Support Stock	2,857	x	0.44	1257
Total Annual VOC (lb/yr)				**4,563**

The emissions for Dairy 2 are calculated as follows:

Lagoon Emissions (Flushed Freestalls & Flushed Corrals)				
Daily Potential to Emit				
Type of Cow	Number of Cows		lb-VOC/hd-yr	lbs-VOC/yr
Milking Cow	6,800	x	1.05	7,140
Dry Cow	1,000	x	0.58	580
Support Stock	5,710	x	0.44	2,512
Total Annual VOC (lb/yr)				**10,232**

Major Source Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
C-5203-1-3 through '-4-3 and '-11-2	0	0	0	0	4,563
C-5203-7-1 through '-10-1 and '-12-1	0	0	0	0	10,232
C-5203-5-0	551	52	28	168	63
C-5203-16-0	0	0	0	0	230
C-5203-17-0	284	0	6	52	15
C-5203-18-0	284	0	6	46	15
C-5203-19-0	1,819	2	19	246	74
SSPE	**2,938**	**54**	**59**	**512**	**15,192**
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No

As seen in the table above, the facility is not a Major Source.

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 Section 3.23

Since each engine is a new emissions unit, BE = PE1 = 0 for all criteria pollutants.

7. SB 288 Major Modification

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

As discussed in Section VII.C.5 above, this facility is not a major source for any of the pollutants addressed in this project; therefore, the project does not constitute a SB 288 Major Modification.

8. Federal Major Modification

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

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM_{10} (140,000 lb/year), it is not a major source for PM2.5 (200,000 lb/year).

9. 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 F.

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*:

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.

*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.

As discussed in Section I, the facility is proposing to install 3 new emergency standby IC engines. Additionally, as determined in Sections VII.C.7 and VII.C.8, this project does not result in an SB288 Major Modification or a Federal Major Modification; therefore, BACT can only be triggered if the daily emissions exceed 2.0 lb/day for any pollutant.

The daily emissions from the new engine are compared to the BACT threshold levels in the following table:

New Emissions Unit BACT Applicability						
Pollutant	Daily PE for unit -17-0 (lb/day)	Daily PE for unit -18-0 (lb/day)	Daily PE for unit -19-0 (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO_X	68.3	68.3	436.6	> 2.0	n/a	Yes
SO_X	0.1	0.1	0.4	> 2.0	n/a	No
PM_{10}	1.5	1.5	4.7	> 2.0	n/a	Yes
CO	12.5	11.1	59.3	> 2.0 and SSPE2 ≥ 200,000 lb/yr	513	No
VOC	3.7	3.7	17.4	> 2.0	n/a	Yes

As shown above, BACT will be triggered for NO_X and VOC emissions from each emissions unit and for PM_{10} only for emissions unit C-5203-19-0.

2. BACT Guideline

BACT Guideline 3.1.1 is applicable to diesel-fired emergency IC engines. This guideline is included in Appendix B.

3. Top Down BACT Analysis

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

Pursuant to the attached Top-Down BACT Analysis in Appendix B of this report, BACT is satisfied for each pollutant for each engine as follows.

C-5203-17-0 and '-18-0

NO_X: EPA Tier 2 Certification level for applicable horsepower range
VOC: EPA Tier 2 Certification level for applicable horsepower range

C-5203-19-0

NO_X: EPA Tier 1 Certification level for applicable horsepower range
VOC: EPA Tier 1 Certification level for applicable horsepower range
PM_{10}: 0.15 g/bhp-hr

- *Emissions from this IC engine shall not exceed 0.06 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]*

B. Offsets

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

Since emergency IC engines are exempt from the offset requirements of Rule 2201, per Section 4.6.2, offsets are not required for these engines, and no offset calculations are required.

C. Public Notification

1. Applicability

Public noticing is required for:

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

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

As demonstrated in VII.C.7 and VII.C.8, this project constitutes neither an SB 288 Major Modification nor a Federal Major Modification; therefore, public noticing for Major Modification purposes is not required.

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 NO_X emissions from unit C-5203-19-0 are greater than 100 lb/day; therefore, public noticing for PE > 100 lb/day purposes is required.

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	551	2,940	20,000 lb/year	No
SO_X	52	54	54,750 lb/year	No
PM_{10}	151,273	151,305	29,200 lb/year	No
CO	168	513	200,000 lb/year	No
VOC	354,671	354,774	20,000 lb/year	No

As detailed above, there were no offset 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.

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

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	2,940	551	2,389	20,000 lb/year	No
SO_x	54	52	2	20,000 lb/year	No
PM_{10}	151,305	151,273	32	20,000 lb/year	No
CO	513	168	345	20,000 lb/year	No
VOC	354,774	354,671	103	20,000 lb/year	No

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

2. Public Notice Action

As discussed above, public noticing is required for this project for NO_X emissions in excess of 100 lb/day from emissions unit C-5203-19-0; 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

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

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

Proposed Rule 2201 (DEL) Conditions:

Unit C-5203-17-0

- *Emissions from this IC engine shall not exceed any of the following limits: 4.11 g-NOx/bhp-hr, 0.75 g-CO/bhp-hr, or 0.22 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]*

- *Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]*

- *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]*

Unit C-5203-18-0

- *Emissions from this IC engine shall not exceed any of the following limits: 4.11 g-NOx/bhp-hr, 0.67 g-CO/bhp-hr, or 0.22 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]*

- *Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]*

- *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]*

Unit C-5203-19-0

- *Emissions from this IC engine shall not exceed any of the following limits: 5.52 g-NOx/bhp-hr, 0.75 g-CO/bhp-hr, or 0.22 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]*

- *Emissions from this IC engine shall not exceed 0.06 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]*

- *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]*

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 Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Recordkeeping requirements, in accordance with District Rule 4702, will be discussed in Section VIII, *District Rule 4702*, of this evaluation.

4. Reporting

No reporting is required to ensure compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to Appendix 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 PM_{10}. The increase in the ambient PM_{10} concentration due to the proposed equipment is shown on the table

titled Calculated Contribution. The levels of significance, from 40 CFR Part 51.165 (b)(2), are shown on the table titled Significance Levels.

Pursuant to District Policy APR 1920, it is highly unlikely that intermittent operating units will cause or contribute to an exceedance of a short term (1, 3, 8, and 24 hour) CAAQS or NAAQS; therefore, the District concurs with EPA's conclusion that modeling such units is not necessary, and will not require intermittent units, as defined in the policy, to perform a short term (1, 3, 8, and 24 hour) CAAQS/NAAQS analysis for permitting purposes.

Significance Levels					
	Significance Levels ($\mu g/m^3$) - 40 CFR Part 51.165 (b)(2)				
Pollutant	Annual Avg.	24 hr Avg.	8 hr Avg.	3 hr Avg.	1 hr Avg.
PM_{10}	1.0	5	N/A	N/A	N/A
$PM_{2.5}$	0.3	1.2			

Calculated Contribution					
	Calculated Contributions ($\mu g/m^3$)				
Pollutant	Annual Avg.	24 hr Avg.	8 hr Avg.	3 hr Avg.	1 hr Avg.
PM_{10}	0.0022	N/A	N/A	N/A	N/A
$PM_{2.5}$	0.0022	N/A	N/A	N/A	N/A

As shown, the calculated contribution of PM_{10} and $PM_{2.5}$ will not exceed the EPA significance level. This project is not expected to cause or make worse a violation of an air quality standard.

Rule 2520 Federally Mandated Operating Permits

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

Rule 4001 New Source Performance Standards (NSPS)

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

The requirements of 40 CFR 60 Subpart IIII (*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*) applies to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion (IC) engines as specified in Section 60.4200. The subpart applies to owners and operators of stationary CI IC engines that commence construction or modification after July 11, 2005 where the stationary CI ICE are: (i) Manufactured after April 1, 2006 and are not fire pump engines, or (ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

The engines in this project are not subject to the requirements of this Subpart since each engine was manufactured prior to April 1, 2006. No further discussion is required.

Rule 4002 National Emission Standards for Hazardous Air Pollutants

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

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

The District has not been delegated the authority to implement NESHAP regulations for Area Source requirements for non-Major Sources; therefore, no requirements shall be included on the permits.

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 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]*

Compliance with this rule is expected.

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 to ensure compliance:

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

Compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – *Risk Management Policy for Permitting New and Modified Sources* specifies that for an increase in emissions associated with a proposed new

source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (included in 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.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
C-5203-17-0	0.26 per million	No
C-5203-18-0	0.26 per million	No
C-5203-19-0	0.59 per million	No

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As shown 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.

The following conditions will be included on the ATCs as shown to ensure compliance with the RMR:

Units C-5203-17-0 and '-18-0

- *Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]*

- *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] N*

- *This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115] N*

Unit C-5203-19-0

- *Emissions from this IC engine shall not exceed 0.06 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115] N*

- *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] N*

- *This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115] N*

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.

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

Each new engine 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 the ATC:

- *{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, compliance with District Rule 4702 requirements will satisfy requirements of District Rule 4701.

Rule 4702 Internal Combustion Engines

The following table demonstrates how the proposed engines will comply with the requirements of District Rule 4702.

District Rule 4702 Requirements Emergency Standby IC Engines	Proposed Method of Compliance with District Rule 4702 Requirements
Operation of emergency standby engines is limited to 100 hours or less per calendar year for non-emergency purposes, verified through the use of a non-resettable elapsed operating time meter.	The following condition will be included on each permit. • *This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702]*
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]* • *{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]*
The owner/operator must operate and maintain the engine(s) and any installed control devices according to the manufacturers written instructions.	The following condition will be included on each permit: • *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]*
The owner/operator must 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]*

Records of the total hours of operation of the emergency standby engine, type of fuel used, purpose for operating the engine, all hours of non-emergency and emergency operation, and 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]* • *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) = $\frac{10.73\,\text{psi}\cdot\text{ft}^3}{\text{lb}\cdot\text{mol}\cdot{}^\circ\text{R}}$

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

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 to ensure compliance:

- *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] N*

Compliance with this rule is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

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

The following table demonstrates how the proposed engines will comply with the requirements of Title 17 CCR Section 93115.

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, was included earlier in this evaluation.
The engine(s) must emit diesel PM at a rate less than or equal to 0.15 g/bhp-hr or must meet the diesel PM standard, as specified in the Off-road compression ignition standards for off-road engines with the same maximum rated power (Title 13 CCR, Section 2423).	The applicant has proposed the use of engines that have certified diesel PM emissions of less than or equal to 0.15 g/bhp-hr.
New stationary diesel-fueled CI engines (> 50 bhp) used in agricultural operations that are generator set engines greater than 50 hp must meet the standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression Ignition Engine Standards (title 13, CCR, section 2423).	The applicant has proposed the use of engines that meet the off-road CI engine certification standard for off-road engines of the same maximum rated horsepower. Conditions limiting each engine's emissions were previously listed in this document.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

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

IX. Recommendation

Pending a successful NSR Public Noticing period, issue Authority to Construct C-5203-17-0, '-18-0, and '-19-0 subject to the permit conditions on the attached draft Authorities to Construct in Appendix A.

X. Billing Information

Billing Schedule			
Permit Number	Fee Schedule	Fee Description	Fee Amount
C-5203-17-0	3020-10-C	314 bhp IC engine	$240.00
C-5203-18-0	3020-10-C	314 bhp IC engine	$240.00
C-5203-19-0	3020-10-F	1,495 bhp IC engine	$749.00

Appendixes

A. Draft ATC
B. BACT Guideline and BACT Analysis
C. Emissions Data Sheet
D. HRA Summary and AAQA
E. SSPE1 Calculations
F. QNEC Calculations

APPENDIX A

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-5203-17-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: BAR 20 PARTNERS LTD
MAILING ADDRESS: PO BOX 1231
FRESNO, CA 93715

LOCATION: 24387 W WHITESBRIDGE RD
KERMAN, CA

EQUIPMENT DESCRIPTION:
314 BHP (INTERMITTENT) JOHN DEERE MODEL # 6068HF475 TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE (SERIAL # PE6068H381332) POWERING AN ELECTRICAL GENERATOR (COMMODITY)

CONDITIONS

1. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {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]
5. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 17 CCR 93115]
6. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115]
7. Emissions from this IC engine shall not exceed any of the following limits: 4.11 g-NOx/bhp-hr, 0.75 g-CO/bhp-hr, or 0.22 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
8. Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]
9. 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]

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

DAVID WARNER, Director of Permit Services
C-5203-17-0: Jul 18 2012 3:29PM – GILLESR : Joint Inspection NOT Required

10. {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]
11. {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]
12. {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]
13. {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]
14. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115]
15. {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
16. {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]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-5203-18-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: BAR 20 PARTNERS LTD
MAILING ADDRESS: PO BOX 1231
FRESNO, CA 93715

LOCATION: 24387 W WHITESBRIDGE RD
KERMAN, CA

EQUIPMENT DESCRIPTION:
314 BHP (INTERMITTENT) JOHN DEERE MODEL # 6068HF475 TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE (SERIAL # PE6068H516887) POWERING AN ELECTRICAL GENERATOR (SHOP)

CONDITIONS

1. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {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]
5. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 17 CCR 93115]
6. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115]
7. Emissions from this IC engine shall not exceed any of the following limits: 4.11 g-NOx/bhp-hr, 0.67 g-CO/bhp-hr, or 0.22 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
8. Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]
9. 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]

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

DAVID WARNER, Director of Permit Services
C-5203-18-0 : Jul 18 2012 3:29PM – GILLESR : Joint Inspection NOT Required

10. {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]
11. {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]
12. {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]
13. {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]
14. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115]
15. {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
16. {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]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-5203-19-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: BAR 20 PARTNERS LTD
MAILING ADDRESS: PO BOX 1231
FRESNO, CA 93715

LOCATION: 24387 W WHITESBRIDGE RD
KERMAN, CA

EQUIPMENT DESCRIPTION:
1,495 BHP (INTERMITTENT) DETROIT DIESEL CORPORATION MODEL # R1637M36 TIER 1 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE (SERIAL # 5362003226) POWERING AN ELECTRICAL GENERATOR (MILK BARN)

CONDITIONS

1. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {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]
5. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 17 CCR 93115]
6. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115]
7. Emissions from this IC engine shall not exceed any of the following limits: 5.52 g-NOx/bhp-hr, 0.75 g-CO/bhp-hr, or 0.22 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
8. Emissions from this IC engine shall not exceed 0.06 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]

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

DAVID WARNER, Director of Permit Services
C-5203-19-0 : Jul 18 2012 3:30PM – GILLESR : Joint Inspection NOT Required

9. 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]

10. {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]

11. {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]

12. {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]

13. {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]

14. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115]

15. {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]

16. {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]

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: 7/10/2009
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/hp-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		

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 Engines

BACT Guideline 3.1.1 (July 10, 2009) 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 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*

   b. Step 2 - Eliminate technologically infeasible options

   The control option listed in Step 1 is technologically infeasible since these engines cannot be certified to the latest EPA tier certification level for the applicable horsepower ranges.

   Consistent with District Policy, these engines have been evaluated for the time that they were installed. For the year of installation (2005), the applicable Tier certification level for engines greater than and equal to 300 bhp and less than 600 hp, was Tier 2 and for generator engines greater than 1,200 hp, the Tier certification level was Tier 1.

   Therefore, for the proposed 314 bhp engines (permit units C-5203-17 and '-18), the applicable control technology option is Tier 2 certification. For the proposed 1,495 bhp engine (permit unit C-5203-19), the applicable control technology option is Tier 1 certification.

   Consistent with District Policy, these engines are considered to meet BACT requirements since they are certified to the current tier level for the time they were installed.

   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

   For units '-17 and '-18, BACT for NOx and VOC will be the use of an EPA Tier 2 certified engine and for unit '-19, BACT for NOx and VOC will be the use of an EPA Tier

1 certified engine. The applicant is proposing such units. Therefore, BACT will be satisfied for each unit.

2. **BACT Analysis for PM_{10} Emissions (Permit Unit C-5203-19):**

a. Step 1 - Identify all control technologies

BACT Guideline 3.1.1 identifies only the following option:

- *0.15 g/bhp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)*

The latest EPA Tier Certification level for an engine greater than 1,200 bhp is Tier 4. Tier 4 IC engines have a PM emission standard of 0.07 g/bhp-hr, which is more stringent than 0.15 g/hp-hr; therefore, a PM/PM_{10} emission standard of 0.10 g/hp-hr is required as BACT.

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

BACT for PM_{10} is emissions of 0.10 g/hp-hr. The applicant is proposing an engine that meets this requirement. Therefore, BACT will be satisfied.

APPENDIX C

Emissions Data Sheet

C-5203-17-0

California Environmental Protection Agency AIR RESOURCES BOARD	DEERE POWER SYSTEMS GROUP OF DEERE & COMPANY	EXECUTIVE ORDER U-R-004-0175 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2004	4JDXL06.8049	4.5, 6.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Smoke Puff Limiter, Engine Modification, Electronic Control Module, Turbocharger, Charge Air Cooler	Pump, Compressor, Generator Set, Industrial Equipment

The engine models and codes are attached.

The following are the exhaust certification standards (STD), and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr); and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW < 225	Tier 2	STD	N/A	N/A	6.6	3.5	0.20	20	15	50
225 ≤ kW < 450	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		CERT	-	-	5.8	1.0	0.13	17	4	36

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 23RD day of December 2003.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

Attachment 2 of 2
U-R-004-0175

Manufacturer: **Deere Power Systems Group of Deere and**
Engine category: **Nonroad CI**
EPA Engine Family: **4JDXL06.8049**
Mfr Family Name: **350HH**
's Code: **Running Change**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
✓ 6068HN051	6068H	225.30@2400	81.50@2400	77.61@2400	626.11@1800	104@1800	74.52@1800	EM EGR SPL TC, CAC

Engine Model Summary Form

C-5203-170

Attachment 1 of U-R-004-175

Manufacturer: Deere Power Systems Group of Deere and

Engine category: Nonroad CI

EPA Engine Family: 4JDXL06.8049

Mfr Family Name: 350HH

Process Code: New Submission

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
6068HF475B	6068H	274.91@2400	119.70@2400	96.79@2400	843.27@1400	160.86@1400	75.91@1400	EM EC 0
4045HF475A	4045H	173.00@2400	114.00@2400	61.56@2400	475.67@1400	140.2@1400	45.40@1400	EM EC 0
6068HF475C	6068H	274.91@2400	117.90@2400	95.46@2400	755.90@1400	145@1400	68.35@1400	EM EC 0
6068HF475D	6068H	250.78@2200	115.60@2200	85.76@2200	755.90@1400	145.2@1400	68.57@1400	EM EC 0
4045HF475B	6068H	159.59@2200	113.70@2200	56.27@2200	475.67@1400	139.9@1400	44.05@1400	EM EC 0
6068HH054	6068H	265.53@2400	113.30@2400	91.72@2400	659.30@1800	127.2@1800	77.17@1800	EM EC 0
6068HH055	6068H	278.94@2400	121.10@2400	98.11@2400	698.38@1800	133.4@1800	80.94@1800	EM EC 0
4045HF475C	4045H	191.77@1800	163.60@1800	66.21@1800				EM EC 0
6068HF475E	6068H	313.80@1800	175.00@1800	106.27@1800				EM EC 0
6068HZ470	6068H	278.94@2400	121.10@2400	98.11@2400	698.38@1800	133.4@1800	80.94@1800	EM EC 0
4045HF475E	6068H	173.00@2200	124.80@2200	61.73@2200	516.23@1400	152.5@1400	49.39@1400	EM EC 0
6068HH057	6068H	278.94@2400	121.10@2400	98.11@2400	698.38@1800	133.4@1800	80.94@1800	EM EC 0
6068HRW54A	6068H	189.09@2100	92.00@2100	65.24@2100	622.42@1400	122@1400	57.54@1400	EM EC 0
6068HRW54B	6068H	206.52@2100	100.00@2100	70.77@2100	680.68@1400	131.9@1400	62.31@1400	EM EC 0
6068HDW61	6068H	175.68@2180	83.00@2180	61.05@2180	634.22@1400	120.9@1400	57.08@1400	EM EC 0
6068HDW57	6068H	177.02@2200	82.50@2200	61.29@2200	612.10@1400	114.7@1400	54.15@1400	EM EC 0

Engine Model Summary Form

Attachment 2 of 2

U-R-004-0175

anufacturer: **Deere Power Systems Group of Deere and**

ıgine category: **Nonroad CI**

'A Engine Family: **4JDXL06.8049**

ir Family Name: **350HH**

s Code: **Running Change**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate, mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6 Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
✓6068HF475G	6068H	281.62@1800	132.00@1800	94.36@1800				EM SPL 0

C-5203-18-0

California Environmental Protection Agency AIR RESOURCES BOARD	DEERE POWER SYSTEMS GROUP OF DEERE & COMPANY	EXECUTIVE ORDER U-R-004-0211 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2005	5JDXL06.8049	4.5, 6.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Smoke Puff Limiter, Direct Diesel Injection, Electronic Control Module, Turbocharger, Charge Air Cooler	Pump, Compressor, Generator Set, Industrial Equipment

The engine models and codes are attached.

The following are the exhaust certification standards (STD), and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr); and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
75 ≤ kW < 130	Tier 2	STD	N/A	N/A	6.6	5.0	0.30	20	15	50
130 ≤ kW < 225	Tier 2	STD	N/A	N/A	6.6	3.5	0.20	20	15	50
225 ≤ kW < 450	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		CERT	-	-	5.8	0.9	0.13	17	4	36

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 18th day of August 2004.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

C-5203-18-0

Attachment 1 of 2
W-R-004-021

Manufacturer: **Deere Power Systems Group of Deere and**
Engine category: **Nonroad CI**
EPA Engine Family: **5JDXL06.8049**
Mfr Family Name: **350HH**
ess Code: **New Submission**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
6068HF475B	6068H	274.91@2400	119.70@2400	96.79@2400	843.27@1400	160.86@1400	75.91@1400	EM EC SPL 0
4045HF475A	4045H	173.00@2400	114.00@2400	61.56@2400	475.67@1400	140.2@1400	45.40@1400	EM EC SPL 0
6068HF475C	6068H	274.91@2400	117.90@2400	95.46@2400	755.90@1400	145@1400	68.35@1400	EM EC SPL 0
6068HF475D	6068H	250.78@2200	115.60@2200	85.76@2200	755.90@1400	145.2@1400	68.57@1400	EM EC SPL 0
4045HF475B	6068H	159.59@2200	113.70@2200	56.27@2200	475.67@1400	139.9@1400	44.05@1400	EM EC SPL 0
4045HF475C	4045H	191.77@1800	163.60@1800	68.21@1800				EM EC SPL 0
6068HF475E	6068H	313.80@1800	175.00@1800	106.27@1800				EM EC SPL 0
6068HZ470	6068H	278.94@2400	121.10@2400	98.11@2400	698.38@1800	133.4@1800	80.94@1800	EM EC SPL 0
4045HF475E	6068H	173.00@2200	124.80@2200	61.73@2200	516.23@1400	152.5@1400	49.39@1400	EM EC SPL 0

Engine Model Summary Form

Manufacturer: **John Deere Power Systems of Deere and**
Engine category: **Nonroad CI**
EPA Engine Family: **5JDXL06.8049**
Mfr Family Name: **350HH**
is Code: **Running Change**

Attachment 2 of 3
U-R-004-0211

1.Engine Code	2.Engine Model	3.BHP @ RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke @ peak torque	8.Fuel Rate: (lbs/hr) @ peak torque	9.Emission Control Device Per SAE J1930
6068HTJ54	6068H	225.30@2200	105.00@2200	77.17@2200	755.90@1400	145.2@1400	68.57@1400	EM EC SPL: DOE TC CAT

Added

Engine Model Summary Form

Manufacturer: **John Deere Power Systems of Deere and**

Engine category: **Nonroad CI**

EPA Engine Family: **5JDXL06.8049**

Mfr Family Name: **350HH**

s Code: **Running Change**

3 of 3

U-R-004-0211

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
6068HN052	6068H	250.78@2200	115.60@2200	85.76@2200	755.90@1400	145.2@1400	68.57@1400	EM EC SPL DI TC, CAC

C-5203-19-0

California Environmental Protection Agency AIR RESOURCES BOARD	DETROIT DIESEL CORPORATION AND MTU	EXECUTIVE ORDER U-R-007-0102 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2005	5DDXL35.8GRP	23.9, 31.8 and 35.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Engine Control Module, Turbocharger, Charge Air Cooler	Generator Set

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbons (HC), oxides of nitrogen (NOx), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
kW > 560	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	N/A	N/A	N/A
		CERT	0.3	7.4	--	1.0	0.08	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 9TH day of December 2004.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

ATTACHMENT 1 OF 4
EO # U-R-007-0102

Manufacturer: **Detroit Diesel Corporation and MTU**
Engine category: **Nonroad CI**
EPA Engine Family: **5DDXL35.8GRP**
Mfr Family Name:
Process Code: **New Sub - continued**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
5284 S	18V-2000 A/A	1676 @ 1800	327	587	Constant speed	NA	NA	EC, TAW or TAA
5283 P	|	1394 @ 1800	276	496	(all ratings)	(all ratings)	(all ratings)	(all ratings)
5282 C	V	1206 @ 1800	238	427				DDI, ECM, TC, CAC
5295 S	18V-2000 SCCC	1676 @ 1800	326	585				
5294 P	|	1394 @ 1800	274	492				
5293 C	V	1206 @ 1800	237	426				

S - standby
P - prime
C - continuous

Engine Model Summary Form

ATTACHMENT 2 OF 4
ED# U-R-007-0102

Manufacturer: **Detroit Diesel Corporation and MTU**
Engine category: **Nonroad CI**
EPA Engine Family: **5DDXL35.8GRP**
Mfr Family Name: **SERIES 2000 MDEC**
Process Code: **New Submission**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
5274 S	12V-2000 A/A	985 @ 1800	285	341	Constant speed	NA	NA	EC, TAW or TAA
5276 P	|	932 @1800	269	322	(all ratings)	(all ratings)	(all ratings)	(all ratings)
5366 P	|	896 @ 1800	270	323				DDI, ECM, TC, CAC
5275 C	|	838 @ 1800	246	295				
5367 C	|	752 @ 1800	230	275				
5368 P	|	1020 @ 1800	294	352				
5277 S	V	1120 @ 1800	323	387				
5285 S	12V-2000 SCCC	985 @ 1800	284	340				
5287 P	|	932 @ 1800	269	322				
5369 P	|	896 @ 1800	270	323				
5286 C	|	838 @ 1800	244	292				
5370 C	|	752 @ 1800	231	277				
5371 P	|	1020 @ 1800	293	351				
5288 S	V	1120 @ 1800	322	385				
5372 S	12V-2000 A/A	838 @ 1500	288	287				
	switchable	928 @ 1800	274	328				
	|							
5373 P	|	758 @ 1500	262	261				
	|	831 @ 1800	248	297				
	|							
5374 S	|	912 @ 1500	313	312				
	|	1020 @ 1800	297	356				
	|							
5375 P	|	838 @ 1500	288	287				
	V	928 @ 1800	274	328				

Engine Model Summary Form

Manufacturer: **Detroit Diesel Corporation and MTU**

Engine category: **Nonroad CI**

EPA Engine Family: **5DDXL35.8GRP**

Mfr Family Name: **SERIES 2000 MDEC**

Process Code: **New Sub - continued**

ATTACHMENT 3 OF 4
EO # U-R-007-0102

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
5376 S	12V-2000 SCCC	838 @ 1500	287	286	Constant speed	NA	NA	EC, TAW or TAA
	switchable	928 @ 1800	274	328	(all ratings)	(all ratings)	(all ratings)	(all ratings)
	|							
5377 P	|	758 @ 1500	260	259				DDI, ECM, TC, CAC
	|	831 @ 1800	248	297				
	|							
5378 S	|	912 @ 1500	311	310				
	|	1020 @ 1800	297	356				
	|							
5379 P	|	838 @ 1500	287	286				
	V	928 @ 1800	274	328				
5380 S	16V-2000 A/A	1350 @ 1800	304	485				
5381 P	|	1227 @ 1800	280	447				
5382 C	|	996 @ 1800	231	369				
5281 S	|	1495 @ 1800	329	525				
5383 P	|	1358 @ 1800	304	485				
5279 C	|	1120 @ 1800	252	402				
5278 S	|	1340 @ 1800	297	474				
5280 P	V	1240 @ 1800	276	441				
5384 S	16V-2000 SCCC	1350 @ 1800	302	482				
5385 P	|	1227 @ 1800	278	444				
5386 C	|	996 @ 1800	230	367				
5292 S	|	1495 @ 1800	330	527				
5387 P	|	1358 @ 1800	303	484				
5290 C	|	1120 @ 1800	253	404				
5289 S	|	1340 @ 1800	298	476				
5291 P	|	1240 @ 1800	277	442				
5495 S	V	1200 @ 1800	261	416				

Engine Model Summary Form

Manufacturer: **Detroit Diesel Corporation and MTU**

Engine category: **Nonroad CI**

EPA Engine Family: **5DDXL35.8GRP**

Mfr Family Name:

Process Code: **New Sub - continued**

ATTACHMENT 4 OF 4
EO# U-R-007-0102

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
5388 S	16V-2000 A/A switchable	1080 @ 1500	274	364	Constant speed (all ratings)	NA (all ratings)	NA (all ratings)	EC, TAW or TAA (all ratings)
		1226 @ 1800	275	439				
5389 P		966 @ 1500	245	326				DDI, ECM, TC, LAC
		1113 @ 1800	250	399				
5390 S		1200 @ 1500	307	408				
		1350 @ 1800	304	485				
5391 P		1080 @ 1500	274	364				
		1226 @ 1800	275	439				
5392 C		878 @ 1500	231	307				
	V	992 @ 1800	225	359				
5393 S	16V-2000 SCCC switchable	1080 @ 1500	273	363				
		1226 @ 1800	274	437				
5394 P		966 @ 1500	243	323				
		1113 @ 1800	250	399				
5395 S		1200 @ 1500	304	404				
		1350 @ 1800	301	480				
5396 P		1080 @ 1500	273	363				
		1226 @ 1800	274	437				
5397 C		878 @ 1500	228	303				
	V	992 @ 1800	224	358				

APPENDIX D

HRA Summary and AAQA

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Robert Gilles - Permit Services
From:	Cheryl Lawler - Permit Services
Date:	July 3, 2012
Facility Name:	Bar 20 Partners, LTD
Location:	24387 W. Whitesbridge Road, Kerman
Application #(s):	C-5203-17-0, 18-0, 19-0
Project #:	C-1120769

A. RMR SUMMARY

RMR Summary					
Categories	**Emergency Diesel ICE (Unit 17-0)**	**Emergency Diesel ICE (Unit 18-0)**	**Emergency Diesel ICE (Unit 19-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	N/A[1]	N/A[1]	N/A[1]	N/A[1]	>1
Acute Hazard Index	N/A[2]	N/A[2]	N/A[2]	N/A[2]	0.00
Chronic Hazard Index	N/A[2]	N/A[2]	N/A[2]	N/A[2]	0.00
Maximum Individual Cancer Risk	**2.6E-07**	**2.6E-07**	**5.9E-07**	1.11E-06	1.11E-06
T-BACT Required?	**No**	**No**	**No**		
Special Permit Conditions?	**Yes**	**Yes**	**Yes**		

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

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit 17-0 & 18-0

1. The PM10 emissions rate shall not exceed **0.09** g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201]
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. [District Rule 4102]
3. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed **100** hours per calendar year. [District Rule 4702 and 17 CCR 93115]

Unit 19-0

1. The PM10 emissions rate shall not exceed **0.06** g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201]
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. [District Rule 4102]
3. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed **100** hours per calendar year. [District Rule 4702 and 17 CCR 93115]

B. RMR REPORT

I. Project Description

Technical Services received a request on June 21, 2012, to perform an Ambient Air Quality Analysis (AAQA) and a Risk Management Review (RMR) for three emergency diesel IC engines.

II. Analysis

Technical Services performed screening level health risk assessments using the District developed DICE database.

The following parameters were used for the reviews:

Analysis Parameters Units 17-0, 18-0, 19-0			
Source Type	Point	**Location Type**	Rural
BHP	2 @ 314 1 @ 1495	**PM_{10} g/hp-hr**	2 @ 0.09 1 @ 0.06
Closest Receptor (m)	366	**Quad**	2
Max Hours per Year	100 each	**Type of Closest Receptor**	Business

Technical Services also performed modeling for criteria pollutants NOx, SOx, PM_{10}, and $PM_{2.5}$; as well as the RMR. For Units 17-0 & 18-0, the emission rates used for criteria pollutant modeling were 284 lb/yr NOx, 0 lb/yr SOx, 6 lb/yr PM_{10}, and 6 lb/yr $PM_{2.5}$. For Unit 19-0, the emission rates used for criteria pollutant modeling were 1819 lb/yr NOx, 2 lb/yr SOx, 19 lb/yr PM_{10}, and 19 lb/yr $PM_{2.5}$.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICEs	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	NA[1]	X	NA[1]	X	X
NO_x	NA[1]	X	X	X	Pass
SO_x	NA[1]	NA[1]	X	NA[1]	Pass
PM_{10}	X	X	X	NA[1]	Pass[2]
$PM_{2.5}$	X	X	X	NA[1]	Pass[2]

*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).

III. Conclusions

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

The cancer risks associated with the operation of the proposed diesel IC engines are 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) for PM10.

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

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.

APPENDIX E

SSPE1 Calculations

Pre Project Stationary Source Potential to Emit (SSPE1) Calculation

SSPE1 is calculated as shown in the table below. ATCs C-5203-7-1, '-8-2, '-9-3. '-10-1, and '-12-1 have not yet been converted to PTOs; however, the facility is operating under the ATC permit conditions and each ATC will be converted to a PTO. Therefore, these emissions are the most current for the permit units mentioned.

SSPE1 (lb/year)						
Permit Unit	NOx	SOx	PM_{10}	CO	VOC	Source
C-5203-1-3	0	0	0	0	1,162	Project C-1110929
C-5203-2-4	0	0	48,416	0	44,005	Project C-1110929
C-5203-3-4	0	0	0	0	9,462	Project C-1110929
C-5203-4-3	0	0	0	0	2,076	Project C-1110929
C-5203-5-0	551	52	28	168	63	Project C-1042116
ATC C-5203-7-1	0	0	0	0	2,720	Project C-1110899
ATC C-5203-8-2	0	0	102,829	0	97,000	Project C-1110899
ATC C-5203-9-3	0	0	0	0	21,220	Project C-1110899
ATC C-5203-10-1	0	0	0	0	4,645	Project C-1110899
C-5203-11-2	0	0	0	0	55,512	Project C-1110929
ATC C-5203-12-1	0	0	0	0	116,576	Project C-1110899
C-5203-16-0	0	0	0	0	230	Project C-1082993
Total SSPE1 (lb/yr)	**551**	**52**	**151,273**	**168**	**354,671**	---

APPENDIX F

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 – C-5203-17-0		
Pollutant	PE2 Total (lb/yr)	Quarterly PE2 (lb/qtr)
NO_X	285	71.25
SO_X	0	0.00
PM_{10}	6	1.50
CO	52	13.00
VOC	15	3.75

QNEC – C-5203-18-0		
Pollutant	PE2 Total (lb/yr)	Quarterly PE2 (lb/qtr)
NO_X	285	71.25
SO_X	0	0.00
PM_{10}	6	1.50
CO	46	11.50
VOC	15	3.75

QNEC – C-5203-19-0		
Pollutant	PE2 Total (lb/yr)	Quarterly PE2 (lb/qtr)
NO_X	1,819	454.75
SO_X	2	0.50
PM_{10}	20	5.00
CO	247	61.75
VOC	73	18.25