

**ENGINEERING EVALUATION  
AUTHORITY TO CONSTRUCT APPLICATION**

Company: Salud Para La Gente

Mailing Address: 204 East Beach Street  
Watsonville, CA 95076

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Project Location: 204 East Beach Street, Watsonville, CA

Authority to Construct: APP-22-00110 (New PTO)  
Renewal Date: TBD (from FAC-4413)

Coordinates: UTM: 611036 m E Latitude °N: 36.911678°  
4085800 m N Longitude °E: -121.753537°

SIC NO.: 8011 (Offices and Clinics of Doctors of Medicine)  
NAISC: 621111 (Offices of Physicians except Mental Health Specialist) Institutional facility per [EPA RICE guidance](#).  
SCC No: 20300102 (IC Engines, Commercial/Institutional, Distillate Oil (Diesel), Reciprocating)

Engineer: Armando Jimenez

Evaluation Date: March 2023

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**I. PROPOSAL: EMERGENCY INTERNAL COMBUSTION ENGINE-GENERATOR SET:**

Salud Para La Gente (facility or applicant) has submitted a permit application for the installation of a new emergency stationary diesel engine-generator set at their medical offices located at 204 East Beach Street in Watsonville.

The proposed stationary diesel generator set is a Taylor Power 250 kilowatt (KW) generator, Model TD250, powered by a model year 2022 Tier 3 Caterpillar diesel engine rated at 296 KW (397 horsepower (HP)).

**II. APPLICABLE RULES:**

Rule 200: Permits Required  
Rule 207: Review of New and Modified Stationary Sources  
Rule 218: Title V Operating Permits  
Rule 221: Federal Prevention of Significant Deterioration  
Rule 222: Federal Minor New Source Review  
Rule 300: District Fees  
Rule 400: Visible Emissions  
Rule 402: Nuisance  
Rule 403: Particulate Matter  
Rule 404: Sulfur Compounds & Nitrogen Oxides  
Rule 412: Sulfur Content of Fuels

Rule 436: Title V: General Prohibitory Rule  
 Rule 1000: Toxic Air Contaminants  
 Rule 1010: ATCM for Stationary Compression Ignition Engines  
 Title 17 CCR Section §93115: ATCM for Stationary Compression Ignition Engines  
 40 CFR Part 60, Subpart IIII, NSPS For Stationary Compression Ignition Internal Combustion Engine  
 40 CFR Part 63, Subpart ZZZZ, NESHAPS For Stationary Reciprocating Internal Combustion Engines  
 CA Health & Safety Code, Section 42301.6 – Public Notice

**III. PROCESS DESCRIPTION:**

The equipment description of the new unit is as follows:

**EMERGENCY DIESEL INTERNAL COMBUSTION ENGINE-GENERATOR SET (250 KW):**

Taylor Power Systems Emergency Standby Generator Set, Model TD250, Rated At 250 KW. Unit Powered By A Turbocharged, Model Year 2022, Tier 3 Caterpillar, Model 1706D, Rated At 296 KW (397 HP) @ 1,800 RPM, Serial Number: TBD, And EPA Family Name NCPXL08.8NZS.

**IV. EMISSIONS CALCULATIONS:**

The applicant has submitted the manufacturer emission data for the Caterpillar engine with model 1706D and EPA family name NCPXL08.8NZS. Table 1 shows the engine emission factors.

Table 1. Emission factors from manufacturers data.

Pollutant:	Emission factor (g/kw-hr)	Emission factor (g/hp-hr)
NO <sub>x</sub>	3.36	2.506
VOC	0.26	0.194
CO	1.5	1.119
PM	0.1	0.075
SO <sub>x</sub> <sup>1</sup>	-	4.01E-03

<sup>1</sup> The emission of SO<sub>x</sub> was not provided. The SO<sub>x</sub> emission factor will be calculated assuming that certified diesel fuel will be used and that all sulfur in the fuel will be combusted into SO<sub>x</sub> as (SO<sub>2</sub>). Based upon an ultra-low sulfur diesel concentration of 15 ppm.

$$\frac{15 \times 10^{-6} \text{ lb S}}{\text{lb diesel}} \times \frac{7.05 \text{ lb diesel}}{\text{gal diesel}} \times \frac{64 \text{ lb SO}_2}{\text{lb mol S}} \times \frac{\text{lb mol S}}{32 \text{ lb S}} = 2.12 \times 10^{-4} \frac{\text{lb SO}_2}{\text{gal diesel}}$$

$$SO_x = \frac{2.12 \times 10^{-4} \text{ lb SO}_2}{\text{gal diesel}} \times \frac{16.55 \text{ gal diesel}}{\text{hr}} \times \frac{454 \text{ g}}{\text{lb}} \times \frac{1}{397 \text{ hp}} = \frac{4.01 \times 10^{-3} \text{ g}}{\text{hp} - \text{hr}}$$

The engine specifications are included in Table 2.

Table 2. Emergency diesel engine specifications.

EPA Family Name	NCPXL08.8NZS
Maximum Fuel Consumption Rate (gph)	16.55
Engine Horsepower (hp)	397
Exhaust Flowrate (cfm)	2,217.8
Exhaust Temperature (°F)	924.8
Exhaust Stack Height (ft.)	8.17
Exhaust Stack Diameter (in.)	5

Table 3 shows the emission from the proposed stationary emergency engine-generator set.

Table 3. Emergency diesel engine potential to emit emissions.

Pollutant:	Daily use (hrs)	Power (hp)	Emission factor (g/hp-hr)	Daily emissions (lb/day)	Annual emissions (ton/yr) <sup>1</sup>
NO <sub>x</sub>	24	397	2.506	52.59	0.55
VOC	24	397	0.194	4.07	0.04
CO	24	397	1.119	23.48	0.24
SO <sub>x</sub>	24	397	4.01E-03	0.08	0.00
PM	24	397	0.075	1.57	0.02

<sup>1</sup> Annual emissions based upon 500 hours per year of max operation for emergency engines, U.S. EPA Memo 9/6/2005.

**V. RULE COMPLIANCE:**

The following District rules apply to the operation as specified:

**MBARD Rule 200 – Permits Required**

The purpose of this Rule is to identify when MBARD permits are issued. The provisions of this Rule shall apply to any person who builds, erects, alters, or replaces any article, machine, equipment or other contrivance which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants.

Pursuant to Section 3.1, person shall build, erect, alter, or replace any article, machine, equipment or other contrivance which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants unless the facility owner or operator has obtained a separate written Authority to Construct for each permit unit from the Air Pollution Control Officer. An Authority to Construct shall remain in effect until the Permit to Operate the equipment for which the application was filed is granted or denied or the application is cancelled.

Exceptions to MBARD Rule 200 are identified in MBARD Rule 201.

**MBARD Rule 207 – Review of New or Modified Sources (as adopted on 4/20/11)**

This Rule provides for the review of new and modified stationary air pollution sources to meet requirements for the review of new and modified stationary sources (NSR) and for the Prevention of Significant Deterioration (PSD), under the provisions of the federal Clean Air Act; and requirements for NSR under the provisions of the California Clean Air Act. The intent of this Rule is to ensure that the most stringent requirements of these programs shall be applied.

This Rule shall apply to all new stationary sources and all modifications to existing stationary sources which, after construction or modification, emit or have the potential to emit any affected pollutants. Thus, the proposed project is subject to the requirements of Rule 207.

***Federal BACT Analysis:***

Pursuant to Section 4.1.1, an applicant shall apply BACT to a new stationary source or modification of an existing source, which has the potential to emit greater than or equal to any one of the affected pollutant levels listed in Table 4.1.1 or a modification of an existing stationary source which has the potential to result in a new emissions increase, as defined in Section 2.37, occurring after October 20, 2010 for PM<sub>2.5</sub> or after August 19, 1983 for PM<sub>10</sub> or after July 15, 1976 for any other affected pollutant.

Table 4 shows the emissions from the proposed project, the facility-wide new emissions and the Federal BACT thresholds of Table 4.1.1.

Table 4. New emissions increases at proposed location.

Application no.:	NO <sub>x</sub> (lb/day)	VOC (lb/day)	CO (lb/day)	SO <sub>x</sub> (lb/day)	PM (lb/day)	PM <sub>10</sub> <sup>1</sup> (lb/day)	PM <sub>2.5</sub> <sup>1</sup> (lb/day)
APP-22-00110 Emergency Engine-Generator Set	52.59	4.07	23.48	0.08	1.57	1.51	1.47
Total:	52.59	4.07	23.48	0.08	1.57	1.51	1.47
Table 4.1.1 BACT Threshold:	150	150	550	150	150	82	54.79

<sup>1</sup> PM<sub>10</sub> and PM<sub>2.5</sub> fractions estimated using CARB’s CEIDARS particulate matter size profile database (6/2022). For stationary diesel IC engines (profile #116): PM<sub>10</sub> = 0.96 PM & PM<sub>2.5</sub> = 0.937 PM.

Table 4 shows that the new emissions, as defined in Section 2.37, exceed the BACT thresholds of Section 4.1.1 for NO<sub>x</sub>. Per MBARD’s guidance for Stationary Non-agricultural Diesel Engines (1/24/2023), emergency generators at non-major sources rated at 175 ≤ HP < 750 need to meet Tier 3 emission standards. The facility is proposing to install a Tier 3 engine that meets the BACT requirements. Table 5 shows the BACT emission guidelines and the proposed Tier 3 engine emission factors.

Table 5. BACT guideline for emergency engines rated 175 ≤ HP < 750.

Pollutant	MBARD BACT guidelines (g/hp-hr)	Proposed engine (g/hp-hr)
NO <sub>x</sub> + NMHC	3.0	2.700
CO	2.6	1.119
PM	0.15	0.075

*California BACT analysis*

Pursuant to Section 5.2, BACT shall be required for any new or modified permit unit with a potential to emit 25 pounds per day or more of VOCs or NO<sub>x</sub>. Table 6 shows that the proposed project triggers the CA BACT threshold for NO<sub>x</sub>. As shown in Table 5, the proposed Tier 3 engine meets MBARD’s BACT emission guidelines.

Table 6. California BACT determination.

Pollutant	BACT threshold (lb/day)	Project emissions (lb/day)	Compliance
NO <sub>x</sub>	25	52.59	BACT triggered
VOC	25	4.07	BACT not triggered

*Offsets analysis*

Pursuant to MBARD Rule 207, Section 1.3.3, the Offset requirements of Sections 4.2 (Federal Offsets) and 5.3 (CA Offsets) shall not apply to any emergency ICE that is either only used for emergency power when normal power line service fails, or are used only for the emergency pumping of water, and are operated less than 60 hours per year for testing and exercise. The emergency engine will be conditioned to operate only when the power line service fails and limited to less than 50 hours per year for testing and exercise.

MBARD Rule 207 – Review of New or Modified Sources (as adopted on 2/15/2017)

**Note that MBARD has not received approval for the 2/15/2017 version of Rule 207 and MBARD is implementing Rule 207 as adopted on 4/20/2011. For informational purposes only, the Rule applicability of Rule 207 as adopted on 2/15/2017 is as follows:**

The purpose of this Rule is to provide for the review of new and modified stationary air pollution sources to meet the New Source Review requirements under the provisions of the California Clean Air Act. This Rule provides mechanisms by which Authorities to Construct may be granted to such sources without interfering with the attainment or maintenance of California ambient air quality standards. Each project subject to New Source Review shall undergo a review under the federal requirements contained within Rule 220 and Rule 221, and a parallel review under the requirements of this Rule and the most stringent applicable provisions shall apply.

Rule 207 applies to all new stationary sources and all modifications to existing stationary sources, which after construction or modification, emit or have the potential to emit any affected pollutants. This project is subject to the requirements of this Rule.

*Best Available Control Technology (BACT) requirements*

Pursuant to Section 4.1.1, BACT shall be required for any new or modified permit unit with a potential to emit 25 pounds per day or more of VOCs or NO<sub>x</sub>. As shown in Table 6 the NO<sub>x</sub> emissions from the proposed emergency engine-generator exceeds the BACT thresholds of Section 4.1.1. Per MBARD guidance for Stationary Non-agricultural Diesel Engines (1/24/2023), emergency generators at non-major sources rated at 175≤HP<750 need to meet Tier 3 emission standards. The facility is proposing to install a Tier 3 engine that meets the BACT requirements, as shown in Table 5.

Pursuant to Section 4.1.2, BACT shall be required for a new or modified stationary source which has the potential to emit greater than or equal to any one of the affected pollutant levels listed in Table 4.1.1.

Table 7 shows the emissions from the new project, the facility-wide emissions and the BACT thresholds of Section 4.1.2, Table 4.1.1.

Table 7. Facility-wide Potential to Emit Emissions.

Application no.:	NO <sub>x</sub> (lb/day)	VOC (lb/day)	CO (lb/day)	SO <sub>x</sub> (lb/day)	PM (lb/day)	PM <sub>10</sub> <sup>1</sup> (lb/day)	PM <sub>2.5</sub> <sup>1</sup> (lb/day)
APP-22-00002 Emergency Engine-Generator Set	52.59	4.07	23.48	0.08	1.57	1.51	1.47
Total:	52.59	4.07	23.48	0.08	1.57	1.51	1.47
Table 4.1.1 BACT Threshold:	150	150	550	150	150	82	54.79

<sup>1</sup> PM<sub>10</sub> and PM<sub>2.5</sub> fractions estimated using CARB’s CEIDARS particulate matter size profile database (3/2017). For diesel IC engines: PM<sub>10</sub> = 0.96 PM & PM<sub>2.5</sub> = 0.937 PM.

Table 7 shows that the new emissions, as defined in Section 2.37, do not exceed the BACT thresholds of Table 4.1.1 for NO<sub>x</sub>.

*Offset requirements!*

Pursuant to MBARD Rule 207, Section 1.3.3, the Offset requirements shall not apply to any emergency ICE that is either only used for emergency power when normal power line service fails, or are used only for the emergency pumping of water, and are operated less than 60 hours per year for testing and exercise. The emergency engine will be conditioned to operate only when the power line service fails and limited to less than 50 hours per year for testing and exercise.

As pointed out, the Rule as amended on 2/15/2017 has not been approved and the version as adopted on 4/20/2011 will be implemented.

MBARD Rule 218 – Title V: Federal Operating Permits

This is the implementing regulation by which MBARD issues the federal Operating Permits. The facility potential to emit (PTE) emissions are below 100 tons per year of any air pollutant, 10 tons per year of a single HAP and 25 tons per year of any combination, therefore, Title V is not applicable. Table 8 shows the PTE emissions for the facility.

Table 8. PTE emissions for the proposed facility in tons per year.

Application no.:	NO <sub>x</sub> (ton/yr)	VOC (ton/yr)	CO (ton/yr)	SO <sub>x</sub> (ton/yr)	PM (ton/yr)
APP-22-00110 Emergency Engine-Generator Set <sup>1</sup>	0.55	0.04	0.24	0.00	0.02
Total:	0.55	0.04	0.24	0.00	0.02

<sup>1</sup> Based upon 500 hours per year of max operation for emergency engines, U.S. EPA Memo 9/6/2005.

MBARD Rule 221 – Federal Prevention of Significant Deterioration

The federal Prevention of Significant Deterioration (PSD) program is a construction permitting program for new major stationary sources and major modifications to existing major stationary sources located in areas classified as attainment or in areas that are unclassifiable for any criteria air pollutant. This Rule provides for the review of new and modified major stationary sources to meet requirements for PSD, under the provisions of the federal Clean Air Act. The purpose of this Rule is to incorporate the federal PSD rule requirements into MBARD’s Rules and Regulations through incorporating the federal requirements by reference.

This Rule shall apply to any source and owner or operator of any source subject to any requirements under Title 40 Code of Federal Regulations, Part 52, Section 21 (40 CFR 52.21), as incorporated into this Rule.

The proposed project does not meet the definition of a new major stationary source, or a major modification to an existing stationary source. Since the Prevention of Significant Deterioration (PSD) program only applies to new major stationary sources, or major modifications to stationary sources, this project is not subject to MBARD Rule 221.

MBARD Rule 222 – Minor New Source Review

This Rule provides for the review of new and modified stationary air pollution sources to meet the requirements for the review of such sources, under the new source review (NSR) provisions of the federal Clean Air Act. This Rule provides mechanisms by which Authorities to Construct may be granted to such sources without interfering with the attainment or maintenance of ambient air quality standards.

This Rule shall apply to any new or modified stationary source that emits an air pollutant (or its precursors) subject to any National Ambient Air Quality Standard (NAAQS).

Compliance with the New Source Review (NSR) provisions of the California Clean Air Act, as defined in MBARD Rule 207, ensures compliance with MBARD Rule 222, Federal Minor NSR.

MBARD Rule 300 – District Fees

This Rule provides the mechanisms for assessing fees for the issuance and renewal of Permits to Operate, Authorities to Construct, and other actions in MBARD's permit system; and to recover MBARD costs for requested services, materials, or equipment. The fees prescribed within this Rule do not exceed the cost of issuing, maintaining, and performing inspection activities pertaining to all permits.

This Rule shall apply to all owners and operators of stationary sources which are required by MBARD Rule 200 *Permits Required* to obtain an Authority to Construct or Permit to Operate; and to requesters of MBARD services, materials, or equipment.

According to MBARD Fee Determination Protocol, affirmed by the Board on 6/16/04, and revised on 8/26/19, the fee code for emergency engines is 202.

For informational purposes only, Table 9 shows the total emissions from the proposed diesel engine.

Table 9. PTE emissions for the emergency engine.

Pollutant	Yearly emissions <sup>1</sup> (ton/yr)
NO <sub>x</sub>	0.55
VOC	0.04
CO	0.24
SO <sub>x</sub>	0.00
PM	0.02
PTE Total:	0.85

<sup>1</sup> Based upon 500 hours per year of max operation for emergency engines, U.S. EPA Memo 9/6/2005.

MBARD Rule 400 – Visible Emissions:

The purpose of this Rule is to provide limits for the visible emissions from sources within MBARD. The provisions of this Rule shall apply to all sources of air pollutant emissions in MBARD.

According to MBARD Rule 400 Section 3.1, 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 or darker than Ringelmann 1, or equivalent 20% opacity. This requirement will be included as a permit condition.

MBARD Rule 402 – Nuisance:

The purpose of this Rule is to provide an explicit prohibition against sources creating public nuisances while operating within MBARD. The provisions of this Rule shall apply to all sources of air pollutant emissions within the Air District.

According to MBARD Rule 402, Part 3, no person shall discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause, or have a natural tendency to cause, injury or damage to business or property. This requirement will be included as a permit condition.

MBARD Rule 403 – Particulate Matter:

The purpose of this Rule is to provide particulate matter emission limits for sources operating within MBARD. The provisions of this Rule shall apply to any source discharging particulate matter while operating within the Air District.

Section 1.3.1 exempts stationary internal combustion engines from the requirements of this Rule.

MBARD Rule 404 – Sulfur Compounds & Nitrogen Oxides

The purpose of this Rule is to provide limits for the emissions of sulfur compounds, nitrogen oxides and nitrogen dioxide from sources within MBARD. The provisions of this Rule shall apply to sources of sulfur compounds, nitrogen oxides, and nitrogen dioxide subject to MBARD Rule 200 *Permits Required*.

Pursuant to Section 1.3.2, any source subject to an emission limit imposed by BACT requirements of Section 4.1 or 5.2 of MBARD Rule 207 Review of New or Modified Sources shall not be subject to Section 3.1 of Rule 404 for the same pollutant. Since the proposed two-staged natural gas boiler is subject to BACT for NO<sub>x</sub>, the unit is not subject to Sections 3.1, which set requirements for NO<sub>x</sub> and SO<sub>2</sub>.

This engine triggered NO<sub>x</sub> BACT requirements of Rule 207 (Review of New or Modified Sources) and is subject to and complies with BACT emission limits for both NO<sub>x</sub> and SO<sub>x</sub>. Accordingly, this engine is exempt from Sections 3.1.1., 3.1.2, 3.1.3, and 3.1.4 of Rule 404, pursuant to Section 1.3.2.

MBARD Rule 412 – Sulfur Content of Fuels:

The purpose of this Rule is to limit emissions of sulfur oxides from combustion sources within MBARD. The provisions of this Rule shall apply to all combustion sources operated within the Air District unless exempted pursuant to Section 1.3 of this Rule.

According to MBARD Rule 412 Part 3, no liquid fuel shall be burned unless the sulfur content is less than 0.5 percent by weight. Pursuant to MBARD Rule 1010, the diesel-fueled engine must only use CARB diesel fuel and will ensure compliance with the sulfur content of this Section.

MBARD Rule 436 – Title V: General Prohibitory Rule

The purpose of this Rule is to provide federally enforceable potential to emit limitations limiting emissions below the thresholds requiring federal Title V operating permits under Rule 218.

General Applicability: This Rule shall apply to any stationary source which would, if it did not comply with the limitations set forth in this rule, have the potential to emit air contaminants equal to or in excess of the threshold for a major source of regulated air pollutants or a major source of hazardous air pollutants (HAPs) and which meets one of the following conditions:

- Rule 436, Section 1.2.1: In every 12-month period, the actual emissions of the stationary source are less than or equal to the emission limitations specified in Section 3.1 (shown below); or
  - 50 percent of the major source thresholds for regulated air pollutants (excluding HAPs), or
  - 5 tons per year of a single HAP, or
  - 12.5 tons per year of any combination of HAPs, or
  - 50 percent of any lesser threshold for a single HAP as the U.S. EPA may establish by rule.
- Rule 436, Section 1.2.2: In every 12-month period, at least 90 percent of the emissions from the stationary source are associated with an operation limited by any one of the alternative operational limits specified in Section 6.1.

Table 8 shows that the annual potential emissions are below the applicability thresholds.

Rule 436 Section 1.3.2.1 allows an exemption from Title V Recordkeeping Requirements of Part 4 if actual emissions, based on annual renewal information sheets, will not exceed in every 12 month period the



following quantities:

- 5 tons per year for regulated (criteria) pollutants.
- 2 tons per year of any sing HAP,
- 5 tons per year of any combination of HAPs per year, and
- 20% of any lesser threshold for a single HAP that the EPA may establish by rule.

As shown in Table 8, the facility is entitled to the exemption from Reporting Requirements of Rule 436 Part 5, pursuant to Section 5.2. Section 5.2 allows an exemption from Title V reporting requirements, if actual emissions, based on annual renewal information sheets, will not exceed in every 12 month period the following quantities:

- 25 tons per year for regulated (criteria) pollutants for which MBARD has federal area designation of attainment, unclassified, transitional or moderate nonattainment.
- 15 tons per year for regulated (criteria) pollutants for which MBARD has federal area designation of serious nonattainment.
- 6.25 tons per year for regulated (criteria) pollutants for which MBARD has federal area designation of severe nonattainment.
- 2.5 tons single Hazardous Air Pollutant (HAP) per year
- 6.25 tons per year of any combination of HAPs per year, or
- 25% of any lesser threshold for a single HAP as the EPA may establish.

Rule 1000 – Toxic Air Contaminants:

This Rule applies to any new or modified stationary sources for which an Authority to Construct or a Permit to Operate is required pursuant to MBARD Regulation II - Permits, and which has the potential to emit into the atmosphere any TAC. Whenever a potential TAC may be subject to more than one MBARD Rule, or to more than one requirement in this rule, the requirement resulting in the least hazard to the public, as determined by the Air Pollution Control Officer, shall apply.

Pursuant to Section 1.3 of this Rule, the provisions of this Rule shall not apply to any Source Category that has an existing State Air Toxics Control Measure (ATCM). Since the proposed diesel-powered engine pump set is subject to the ATCM for Stationary Compression Ignition Engines, the project is exempt from Rule 1000.

However, diesel PM is considered a toxic air contaminant (TAC). Due to the toxicity nature of diesel PM, the diesel engine will be subject to the requirements of AB2588, Air Toxic “Hots Spots” Information and Assessment Act of 1987. Thus, a prioritization assessment was conducted for informational purposes, using a worst case scenario, and not actual hours of operation.

Table 10 shows the prioritization scores for the diesel engine based on an annual operation of 50 hours for the maintenance/testing hour limit, school distance is about 157 feet (48 meters) and nearest residential receptor within 38 feet (11.5 meters). The receptor distance is less than 100 meters, which results in a receptor proximity (RP) value of 1.0. As shown in the table below, the chronic value is 1.97 and the cancer risk prioritization score is 7.575. The unit may be subject to further AB2588 requirements.

Table 10. Prioritization scores.

Acute <sup>1</sup>	0.0
Chronic	1.97
Cancer	7.575

<sup>1</sup> Diesel PM does not have an acute REL.

The prioritization spreadsheet is included in the permit file.

#### Rule 1010 – ATCM for Stationary Compression Ignition Engines

The purpose of this rule is to reduce diesel particulate matter (PM) from stationary diesel-fueled compression ignition (CI) engines and consistent with California Health and Safety Code Section 39666(d) is a replacement rule for 17 California Code of Regulations Section 93115, Airborne Toxic Control Measure For Stationary Compression Ignition Engines.

This Rule applies to any person who sells a stationary CI engine, offers a stationary CI engine for sale, leases a stationary CI engine, or purchases a stationary CI engine for use in MBARD, unless such engine is: a portable CI engine, a CI engine used to provide motive power, an auxiliary CI engine used on a marine vessel, or an agricultural wind machine. The Rule applies to any person who owns or operates a stationary CI engine in MBARD with a rated brake horsepower greater than 50 (>50 bhp).

#### *Diesel Fuel Requirement of Section 3.1*

Pursuant to Section 3.1, no owner or operator of any stationary diesel-fueled CI engine shall add to the engine or any fuel tank directly attached to the engine any fuel unless the fuel is one of the following:

- CARB Diesel Fuel; or
- an alternative diesel fuel that is:
  - biodiesel;
  - a biodiesel blend that does not meet the definition of CARB Diesel Fuel;
  - a Fischer-Tropsch fuel; or
  - an emulsion of water in diesel fuel; or
- any alternative diesel fuel that is not identified in Subsection 3.1.2 above and meets the requirements of the Verification Procedure; or
- an alternative fuel; or
- CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure; or
- any combination of the above fuels.

#### *New Emergency Standby Diesel Engine At-School and Near-School Provisions*

Pursuant to Section 3.2.1.1, no owner or operator shall operate a new stationary emergency diesel engine for non-emergency use (including maintenance and testing) with emissions of greater than 0.01 g/hph-hr of diesel PM during the following periods:

- whenever there is a school sponsored activity, if the engine is located on school grounds, and
- between 7:30 a.m. and 3:30 p.m. on days when school is in session, if the engine is located within 500 feet of school grounds.

Since the engine is located within 500 feet of Watsonville High School, the permit will be conditioned to meet the requirements of Section 3.2.1.1.

#### *Emergency Standby Diesel-Fueled CI Engines (>50 HP) – Diesel PM Standard*

Pursuant to Section 3.2.1.3.1, the emissions from the new stationary emergency standby diesel-fueled engine shall be less than or equal to 0.15 g/bhp-hr; or meet the diesel PM standard, as specified in the federal Standards of Performance for Stationary Compression Ignition Internal Combustion Engines with the same maximum rated power (40 CFR Part 60, Subpart IIII), in effect on the date of acquisition or submittal, as defined in Section 2.15 whichever is more stringent. The proposed engine is a Tier 3 unit and meets the

requirements of this Section.

*Emergency Standby Diesel-Fueled CI Engines (>50 HP) – Maintenance & Testing: Hours of Operation*  
 Pursuant to Section 3.2.1.3.1.1.3, the new engines shall not operate more than 50 hours per year for maintenance and testing purposes. This subsection does not limit operation for emergency use and for emission testing to show compliance with Subsection 3.2.1.3. A permit condition will be added to meet this requirement.

*Record-keeping Requirements*

MBARD Rule 1010 Section 4.1.5 requires a non-resettable hour meter to be installed with a minimum display capacity of 9,999 hours. Furthermore, MBARD Rule 1010 Section 4.1.7 requires the monthly reporting of the following:

- Emergency use hours of operation;
- Maintenance and testing hours of operation;
- Hours of operation for emission testing to show compliance with Sections 3.2.1;
- Initial start-up testing hours; and,
- Fuel used.

Pursuant to Section 4.1.7.2, the owner or operator of the diesel engine must retain records for a minimum of 36 months and maintain on-site records for the prior 24 months. Records from the prior 25 to 36 months must be made available to MBARD staff within 5 working days from request.

Title 17 CCR Section §93115 – ATCM for Stationary Compression Ignition Engines

The requirements of this Rule are superseded by MBARD Rule 1010.

40 CFR Part 60, Subpart IIII, NSPS For Stationary Compression Ignition (CI) Internal Combustion Engine Emission Standards: 60.4205(b), 60.4202

Pursuant to §60.4205(b), owners/operators of 2007 model and later stationary emergency diesel engine-generator sets with a displacement less than 30 liters must comply with §60.4202. In accordance with §60.4202(a)(2), for emergency engines rated greater than or equal to 37 kW (50 HP), the Tier 2 or Tier 3 emission standards for new nonroad CI engines for the same rated power as described in 40 CFR part 1039, appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105 beginning in model year 2007.

Table 11 shows the comparison of 40 CFR part 1039, appendix I Tier 3 emission standards and the proposed engine emissions from manufacturer specifications, which shows that the proposed 296 KW (397 HP) engine complies with the Tier 3 standards.

Table 11. 40 CFR part 1039, appendix I Tier 3 standards for engines rated  $130 \leq \text{KW} \leq 560$ .

Pollutant	§89.112 Standards (g/kw-hr)	Caterpillar engine’s emissions (g/kw-hr)
NMHC +NO <sub>x</sub>	4.0	3.62
CO	3.5	1.5
PM	0.20	0.1

*Fuel Requirements: 60.4207(a), (b), (e)*

The fuel requirements of this Subpart are subsumed by MBARD Rule 1010, which requires the diesel engine to use CARB diesel fuel.

*Compliance Requirements: 60.4206, 60.4211(a), (c), (f)*

Pursuant to Section §60.4206, owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

Pursuant to Section §60.4211(a), the emergency diesel engine is required to be operated and maintained in accordance with manufacturer specifications and procedures.

Section §60.4211(c) requires the owner to comply with the emissions standards by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications.

Pursuant to Section §60.4211(f), an emergency stationary ICE must be operated according to requirements in (f)(1)-(3) of Subpart III. Any operation except emergency operation, maintenance and testing, and non-emergency operation for 50 hrs/yr, is prohibited. Note that MBARD Rule 1010 only allows the use of the engine for emergency operation, maintenance and testing, emergency demand response. The permit will not be allowed for non-emergency use, or demand response.

Pursuant to Section §60.4211(f)(1), there is no time limit on the use of emergency stationary ICE in emergency situations.

Pursuant to Section §60.4211(f)(2), for the purposes listed in paragraphs (f)(2)(i)-(iii), the emergency stationary ICE may be operated for a maximum of 100 hrs/calendar year.

- (f)(2)(i) – emergency stationary ICE may be operated for maintenance checks and readiness testing. This requirement is subsumed by MBARD Rule 1010, which only allows 50 hours for this purpose.
- (f)(2)(ii)(iii) – (reserved).

Pursuant to Section §60.4211(g), if the owner/operators do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or the owner/operator change emission-related settings in a way that is not permitted by the manufacturer, the owner/operator must demonstrate compliance as follows:

*Engines rated greater than or equal to 100 HP and less than 500 HP - §60.4211(g)(2)*

The owner/operator must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the owner/operator must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the owner/operator change emission-related settings in a way that is not permitted by the manufacturer.

*Notification, Reports, and Records Requirements: 60.4214(b)*

Pursuant to Section §60.4214(b), emergency stationary engines are not required to submit an initial notification.

40 CFR Part 63, Subpart ZZZZ, NESHAPS For Stationary Reciprocating Internal Combustion Engines  
Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

Pursuant to Section §636590(c), any new or reconstructed stationary RICE located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart III, for compression ignition engines and no further requirements apply for such engines under this part. Thus, the proposed engine is not subject to the requirements of this Subpart.

Health & Safety Code (H&SC) Section 42301.6 – Public Notification Requirements:

Pursuant to Section §42301.6(a), prior to approving an application for a permit to construct or modify a source that emits hazardous air emissions, and that source is located within 1,000 feet from the outer boundary of a school site, the air pollution control officer shall prepare a public notice in which the proposed project or modification for which the application for a permit is made is fully described. The notice may be prepared whether or not the material is or would be subject to subdivision (a) of Section 25536, if the air pollution control officer determines and the administering agency concurs that hazardous air emissions of the material may result from an air release, as defined by Section 44303. The notice may be combined with any other notice on the project or permit that is required by law.

The proposed project is located within 1,000 feet of Watsonville High School as shown in Figure 1.

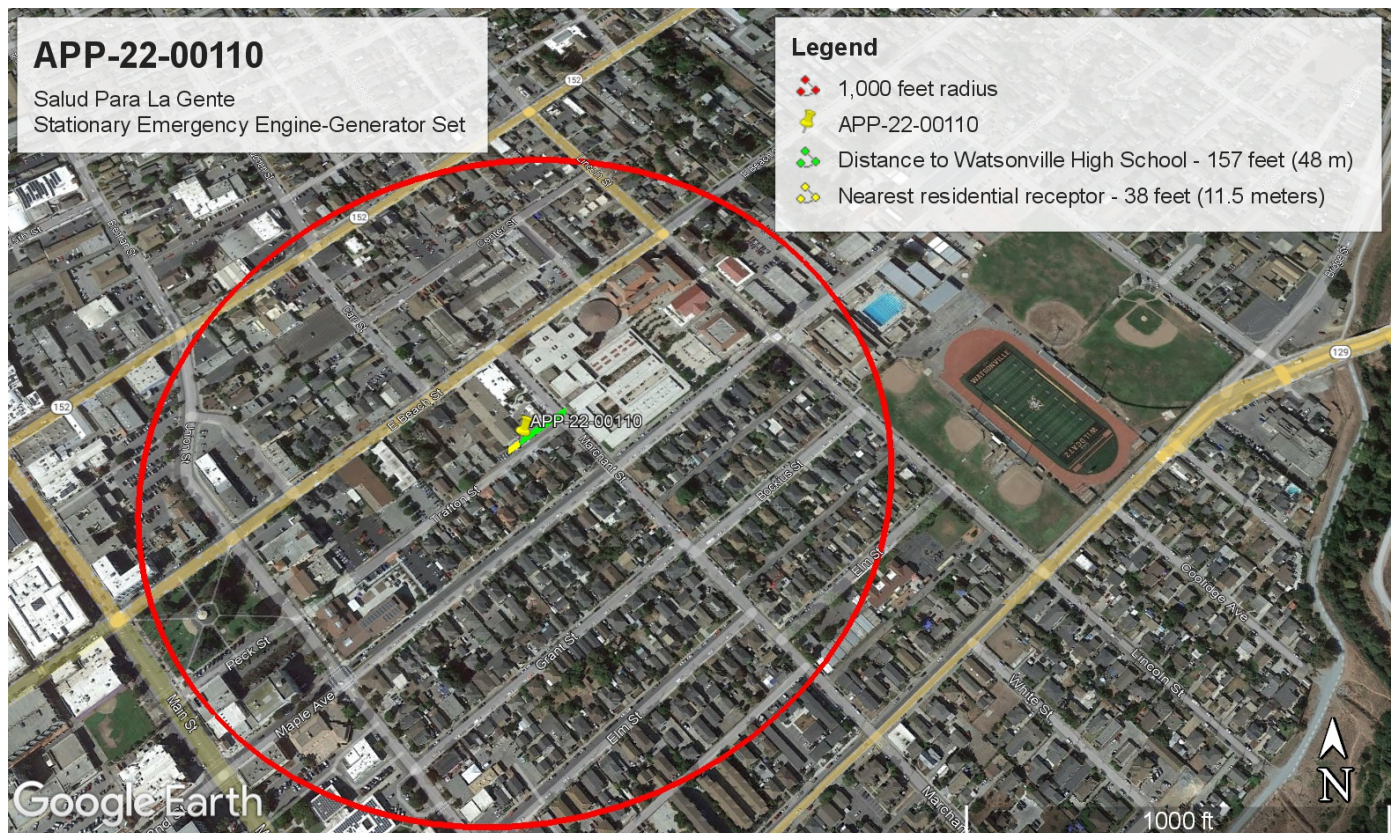


Figure 1. Google Earth Pro image. Project is not located within 1,000 feet of any school.



The District protocol adopted by the board on 11/14/01 specifies the risk thresholds for public notification. If the carcinogenic risk is in excess of 1 in a million or non-carcinogenic risk is at or above the applicable Reference Exposure Levels, the District will do the Public Notice. If the evaluation determines that the emissions point is within 1,000 feet from the outer boundary of a kindergarten through grade 12 school **and** equals or exceeds the risk thresholds contained in this policy, the proposed project is subject to notification requirements of H&SC Section §42301.6.

Lakes Environmental AERMOD was used to model the concentrations from the emergency diesel engine. The AERMOD concentration files were used in CARB’s Air Dispersion Modeling Risk Tool (ADMRT). As shown in Figure 2, the adjacent buildings (marked as A & B) were included in AERMOD’s building downwash.



Figure 2. Adjacent buildings included in building downwash on AERMOD.

Table 12 shows the input modeling parameters used to model the exhaust dispersion from the proposed diesel engine. The receptors included a discrete cartesian set to cover the receptors at the schools and discrete receptors selected for the residents outside the school.

Table 12. Diesel engine rated at 247 HP modeling parameters.

Source ID <sup>1</sup>	1
Source type <sup>2</sup>	Point
X Coordinate	611036
Y Coordinate	4085800
Base elevation <sup>3</sup>	31.82 ft
Release height	8.17 feet
Emissions rate <sup>4</sup>	1 g/sec
Stack diameter	5 inches
Gas exit flow rate	2,217.8 cfm

Gas exit temperature	924.8 °F
Met station elevation <sup>5</sup> (Watsonville)	48.8 meters
Building A Height	26.25 feet
Building B Height	16.40 feet
Maximum 1-hr Concentration	1,1293.77 µg/m <sup>3</sup>
Maximum Period Concentration	84.24 µg/m <sup>3</sup>

<sup>1</sup> Source ID 1 used because AERMOD results will be loaded into CARB’s ADMRT tool where source ID will be identified as 1.

<sup>2</sup> Since the engine is equipped with a vertical exhaust, a point source was selected.

<sup>3</sup> Base elevation was uploaded automatically when running AERMAP on AERMOD.

<sup>4</sup> Emission rate set to 1 g/sec because AERMOD results will be loaded into CARB’s ADMRT tool.

<sup>5</sup> Met elevation from CARB’s HARP AERMOD Meteorological Files web page: [HARP AERMOD Meteorological Files | California Air Resources Board](#). Accessed on 3/28/2023.

For the receptors, discrete receptors were used. Receptors 1-88 were placed around the school, receptors 89-170 were placed at residential homes and receptors 170-194 were placed at offsite workplaces.

For the school & residential exposure, the following options were selected:

- Analysis type: cancer, chronic, and acute.
- Receptor type: individual resident
- Exposure duration: 30 year
- Intake rate percentile: OEHHA derived method
- Pathways to evaluate: mandatory minimum pathways.

Table 13 shows the Health Risk Assessment values of the proposed project for the school exposure. The cancer risk is 1.45 in 1 million and it exceeds the public notice threshold of 1.0 in a million. However, the risk is below MBARD’s Rule 1000 threshold of 10 in a million. The chronic risk is 3.35E-04, which is below the MBARD’s Rule 1000 threshold of 1.0.

Table 13. Health risk assessment results for school receptors.

Risk	Receptor ID	x-coordinate	y-coordinate	Value	Rule 1000 compliant?
Acute Max HI	N/A	N/A	N/A	N/A	N/A
Chronic Max HI	5	611065.21	4085846.82	3.35E-04	Yes
Cancer Risk	5	611065.21	4085846.82	1.45E-06	Yes

Table 14 shows the Health Risk Assessment values of the proposed project for the residential exposure. The cancer risk is 1.45 in 1 million and it exceeds the public notice threshold of 1.0 in a million. However, the risk is below MBARD’s Rule 1000 threshold of 10 in a million. The chronic risk is 3.35E-04, which is below the MBARD’s Rule 1000 threshold of 1.0.

Table 14. Health risk assessment results for residential receptors.

Risk	Receptor ID	x-coordinate	y-coordinate	Value	Rule 1000 compliant?
Acute Max HI	N/A	N/A	N/A	N/A	N/A
Chronic Max HI	92	611007.53	4085804.84	7.95E-04	Yes
Cancer Risk	92	611007.53	4085804.84	3.44E-06	Yes

Since the cancer risk is greater than 1 in a million, the proposed project is subject to notification requirements

of H&SC Section §42301.6. The public notification files are saved on the permit file.

**VI. CONCLUSIONS:**

The equipment has the capability to comply with all applicable MBARD rules and regulations.

**VII. RECOMMENDATIONS:**

Issue revised Authority to Construct GNR with the conditions below after the completion of the notification requirements of H&SC Section §42301.6.

1. No later than twenty-four (24) hours prior to start-up of the equipment, Salud Para La Gente must notify the Monterey Bay Air Resources District (MBARD) and arrange for an inspection of the equipment during normal operation to verify compliance with MBARD Rules and Regulations. [Basis: MBARD Rule 207]
2. Annual emergency use hours of operation, maintenance and testing hours of operation, and diesel fuel usage shall be reported to MBARD, upon request. [Basis: MBARD Rule 207]
3. Except for maintenance and testing purposes, this equipment shall only be operated when the local utility powerline service fails. [Basis: MBARD Rule 1010]
4. The equipment shall be operated no more than 50 hours per year for maintenance and testing purposes. [Basis: MBARD Rule 207, MBARD Rule 1010 and 40 CFR 60 Subpart III]
5. The engine is prohibited for non-emergency use, including maintenance and testing, whenever there is a school sponsored activity, and between the hours of 7:30 AM and 3:30 PM on days when Watsonville High School is in session. [Basis: MBARD Rule 1010]
6. Salud Para La Gente shall maintain a log, summarized monthly, to record the following: [Basis: MBARD Rule 1010 and 40 CFR 60 Subpart III]
  - a. Date of operation;
  - b. Start and end engine hour meter readings;
  - c. Emergency use hours of operation;
  - d. Maintenance and testing hours of operation; and,
  - e. Fuel usage, (gallons/month). If no fuel records available, fuel usage can be based on a maximum fuel usage rate of 16.55 gallons per hour for this engine.

Records shall be retained for at least three (3) years and made readily available to MBARD staff upon request.

7. The engine shall be equipped with a non-resettable meter which registers the total hours operated, and shall be maintained in good working condition. [Basis: MBARD Rule 1010 & 40 CFR 60, Subpart III]
8. The engine must be installed and configured according to the manufacturer's emission-related written instructions. [Basis: 40 CFR 60, Subpart III, §60.4211(c)]



9. The engine shall be operated and maintained in accordance with manufacturer's emission-related written instructions. Maintenance records shall be retained with other required engine operational data as specified in Condition 6. [Basis: MBARD Rule 1010 & 40 CFR 60, Subpart III, §60.4211(a)]
10. Operation of the engine that is not in accordance with the manufacturer's emission-related written instructions, or changes in the manufacturer's emission-related settings constitutes a modification of the permit and requires prior District approval. [Basis: 40 CFR 60, Subpart III, §60.4211(g)]
11. The diesel fuel consumed shall meet California Air Resources Board (CARB) specification, or the alternative diesel fuel specifications as defined in MBARD Rule 1010. [Basis: MBARD Rule 1010 & 40 CFR 60, Subpart III]
12. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, an interruptible power contract, or base interruptible program. [Basis: MBARD Rule 1010]
13. 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 or darker than Ringelmann 1, or equivalent 20 percent opacity. [Basis: MBARD Rule 400]
14. No emissions shall constitute a public nuisance. [Basis: MBARD Rule 402]