

**ENGINEERING EVALUATION  
AUTHORITY TO CONSTRUCT APPLICATION**

Company: Monterey One Water

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Project Location: Wastewater & Reclamation Plant & Various Location Within M1W Service Area  
14811 Del Monte Blvd, Marina, CA

Authority to Construct: APP-26-00013 – Replacement PTO GNR-0018368 Prime Engine-Gen Set  
APP-26-00014 – Replacement PTO GNR-0018368 Prime Engine-Gen Set

Renewal Date: May 3 (FAC-133)

SIC NO.: 4941 (Water Supply)  
NAICS: 221320 (Sewage Treatment Facilities)  
SCC No: 20100102 (IC Engines, Electric Generation, Distillate Oil (Diesel), Reciprocating)

Engineer: Armando Jimenez  
Evaluation Date: May 2026

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**I. PROPOSAL: PORTABLE PRIME DIESEL ENGINE-GENERATOR SETS:**

Monterey One Water (M1W) has submitted permit applications for the replacement of the portable diesel engine-generator set under Permit to Operate (PTO) GNR-0018368 with a new Yanmar HRVW 1250 Twin-Pack engine-generator set with a standby rating of 1,100 kilowatt (KW) and prime rating of 1,000 KW. The new Yanmar twin-pack generator is powered by two (2) identical Volvo Penta Tier 4 Final diesel engines. Each of the Volvo Penta Tier 4 Final diesel engines will be permitted with its own permit to operate. M1W will operate the portable prime generator at various location within its service area and at M1W Wastewater Treatment & Reclamation Plant (RTP) at 14811 Del Monte Blvd.

The application noted that the portable generator will be used to a maximum of 8,760 hour per year for both prime use and maintenance & readiness (M&R). In addition, M1W proposes that when operating at the RTP site, only two (2) of the three (3) digester gas cogeneration engines under PTOs GNR- 0018362, GNR-0018363, and GNR-0018364 will be operational. This operating scenario will ensure compliance with the existing facility-wide emissions limit, see proposed conditions number 4, 5, and 6.

Application	Old PTO	Proposed Equipment	Operating Locations
APP-26-00013	GNR-0018368 emergency engine-gen set powered by a Caterpillar Tier 1 diesel engine rated at 1,114 HP.	Yanmar HRVW 1250 portable prime engine-gen set powered by two (2) identical Volvo Penta Tier 4 Final diesel engines, each rated at 796 HP.	RTP & Various locations within M1W service area
APP-26-00014			

Figure 1 shows a snippet of the new Yanmar twin-pack portable engine-generator set, model HRVW-1250.



Figure 1. Yanmar Twin Pack Engine-Gen Set, Model HRVW-1250.

Table 1 shows the possible operating locations for the proposed portable engine generator set for prime mode. These locations are not located within 1,000 feet from the outer boundary of a school site (kindergarten through 12 grade).

Table 1. Possible operating locations for prime mode.

Station Name	Address	Annual Hours in Prime Mode (hr/yr)	Location within 1,000 feet of a school?
RTP	14811 Del Monte Blvd, Monterey	1,400	No
Monterey PS #1	1951 Del Monte Ave, Monterey	500	No
Monterey PS #6	Canyon Del Rey & Hwy 68, Monterey	20	No
Seaside PS #23	West Bay St, Sand City	500	No
Fort Ord PS #24	Marina Drive, Marina	500	No
Castroville PS #25	Hwy 1, Castroville	20	No
Moss Landing PS #26	Moss Landing Rd, Moss Landing	100	No
Salinas PS #27	Hitchcock Rd, Salinas	500	No
Marina PS #30	Seaside Ct/Reservation, Marina	500	No

Table 2 shows the possible operating locations for the proposed portable engine generator set for emergency mode. The Monterey PS #7 location is the only location within 1,000 feet of a school site, kindergarten through grade 12.

Table 2. Possible operating locations for emergency mode.

Station Name	Address	Location within 1,000 feet of a school?
DLI #1	Presidio of Monterey, Monterey	No
DLI #2	Presidio of Monterey, Monterey	No
Monterey PS #7 (PS 7)	Reeside & Cannery Row, Monterey	Yes
Pacific Grove PS # 12	Ocean View & 9th St, Pacific Grove	No
Pacific Grove PS #13 (PS 13)	Ocean View & Fountain Ave, Pacific Grove	No
Pacific Grove PS #15 (PS 15)	Ocean View & Coral St, Pacific Grove	No
Pacific Grove PS #16	Sunset & Arena, Pacific Gove	No
Pond Three Pump Station (P3PS)	South Davis Road, Salinas	No

**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
- AB2588 Air Toxic “Hot Spots” Information & Assessment Act
- Title 17 CCR Section §93116: ATCM for Diesel Particulate Matter From Portable Engines Rated at 50 Horsepower and Greater
- CA Health & Safety Code, Section 42301.6 – Public Notice

**III. EQUIPMENT DESCRIPTION:**

APP-26-00013: PORTABLE PRIME INTERNAL COMBUSTION ENGINE-GENERATOR SET:  
 Yanmar Portable Prime Generator Set, Model HRVW-1250, With Combined Standby Rating Of 1,100 Kilowatt (KW) & Prime Rating Of 1,000 KW. Yanmar Generator Powered By Two (2) Identical Diesel Engine-Generator Sets. Engine-Generator Configuration As Follows:

Volvo Penta Diesel Engine Set #1:

Model Year 2023, Tier 4 Final Volvo Penta Diesel Engine, Model No. TWD1672GE, Serial #TBD, Rated At 615 KW (825 HP) @ 1,800 RPM, EPA Family Name PVPXL16.1CDC.

Engine Equipped With The Following Emission Control Equipment: Electronic Direct Injection (DDI), Electronic Control Module (ECM), Turbocharger (TC), Charge Air Cooler (CAC), Smoke Puff Limiter (SPL), Selective Catalytic Reduction-Urea (SCR-U), And Ammonia Oxidation Catalyst (AMOX).

Volvo Penta Diesel Engine Set #2, Unit Operates Under A Separate Permit To Operate.

APP-26-00014: PORTABLE PRIME INTERNAL COMBUSTION ENGINE-GENERATOR SET:  
 Yanmar Portable Prime Generator Set, Model HRVW-1250, With Combined Standby Rating Of 1,100 Kilowatt (KW) & Prime Rating Of 1,000 KW. Yanmar Generator Powered By Two (2) Identical Diesel Engine-Generator Sets. Engine-Generator Configuration As Follows:

Volvo Penta Diesel Engine Set #1, Unit Operates Under A Separate Permit To Operate.

Volvo Penta Diesel Engine Set #2:

Model Year 2023, Tier 4 Final Volvo Penta Diesel Engine, Model No. TWD1672GE, Serial #TBD, Rated At 615 KW (825 HP) @ 1,800 RPM, EPA Family Name PVPXL16.1CDC.

Engine Equipped With The Following Emission Control Equipment: Electronic Direct Injection (DDI), Electronic Control Module (ECM), Turbocharger (TC), Charge Air Cooler (CAC), Smoke Puff Limiter (SPL), Selective Catalytic Reduction-Urea (SCR-U), And Ammonia Oxidation Catalyst (AMOX).

**IV. EMISSIONS CALCULATIONS:**

The emissions profile for the proposed new model year 2023 Volvo Penta diesel engines with EPA Family Name PVPXL16.1CDC will be estimated based the [California Air Resources Board \(CARB\) executive order \(EO\) U-R-014-0203](#). Table 3 shows the engine emission factors at full standby.

Table 3. Engine emission factors based on CARB EO U-R-014-0203.

Pollutant:	Emission factor (g/kw-hr)	Emission factor (g/hp-hr)
NO <sub>x</sub>	0.36	0.268
VOC	0.01	0.007
CO	0.10	0.075
SO <sub>x</sub> <sup>1</sup>	-	3.63E-03
PM	0.02	0.0149

<sup>1</sup> The NO<sub>x</sub>, VO, CO, and PM emission factors from CARB EO U-R-014-0203. The NO<sub>x</sub> emission standard was estimated to be 95% of the total off-road standards provided as NMHC + NO<sub>x</sub> and the VOC emission standard was estimated to be 5% of the total off-road standard provided as NMHC + NO<sub>x</sub>.

<sup>2</sup>The emission of SO<sub>x</sub> was provided and noted that it was based on ultra-low sulfur diesel with concentration of 15 ppm:

$$\frac{15 \times 10^{-6} \text{ lb } S}{\text{lb diesel}} \times \frac{7.05 \text{ lb diesel}}{\text{gal diesel}} \times \frac{64 \text{ lb } SO_2}{\text{lb mole } S} \times \frac{\text{lb mole } S}{32 \text{ lb } S} = 2.12 \times 10^{-4} \frac{\text{lb } SO_2}{\text{gal diesel}}$$

$$SO_x = \frac{2.12 \times 10^{-4} \text{ lb } SO_2}{\text{gal diesel}} \times \frac{31.1 \text{ gal diesel}}{\text{hr}} \times \frac{454 \text{ g}}{\text{lb}} \times \frac{1}{825 \text{ hp}} = \frac{3.63 \times 10^{-3} \text{ g}}{\text{hp} - \text{hr}}$$

The manufacturers’ engine specifications are included in Table 4.

Table 4. Volvo Penta TWD1672GE diesel engine specifications.

EPA Family Name	PVPXL16.1CDC
Maximum Fuel Consumption Rate (gph) <sup>1</sup>	31.1
Engine Horsepower (HP)	825

Exhaust Flowrate (cfm)	4,025
Exhaust Temperature (°F)	793
Exhaust Stack Height (ft.)	14
Exhaust Stack Diameter (in.)	8.5

Table 5 shows the potential to emit (PTE) emission from each of the proposed Volvo stationary prime TWD1672GE engines.

Table 5. Prime diesel engine potential to emit emissions for each proposed generator set.

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	825	0.268	11.69	2.13
VOC	24	825	0.007	0.31	0.06
CO	24	825	0.075	3.27	0.60
SO <sub>x</sub>	24	825	3.63E-03	0.16	0.03
PM	24	825	0.0149	0.65	0.12
PM <sub>10</sub> <sup>2</sup>	24	825		0.62	0.00
PM <sub>2.5</sub> <sup>2</sup>	24	825		0.61	0.00

<sup>1</sup> Annual emissions based upon 8,760 hours per year of prime use as proposed by permit application.

<sup>2</sup> PM<sub>10</sub> and PM<sub>2.5</sub> fractions estimated using CARB’s CEIDARS particulate matter size profile database (9/2025). For diesel IC engines (profile #116): PM<sub>10</sub> = 0.96 PM & PM<sub>2.5</sub> = 0.937 PM.

**V. RULE COMPLIANCE:**

The following Monterey Bay Air Resources District (MBARD) 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. The proposed project is subject to the requirements of Rule 207.

*Federal Best Available Control Technology (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 6 shows the emissions from the proposed portable engine-generator set at the Regional Treatment Plant, the facility-wide new emissions and the Federal BACT thresholds of Table 4.1.1.

Table 6. New emissions increases.

Permit 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> (lb/day)	PM <sub>2.5</sub> (lb/day)
7945B Emer. Tier 0 diesel eng-gen - 449 HP <sup>1,2,5</sup> (1997)	221.5	3.8	60.0	0.12	18.0	17.28	16.87
11806A Emer. Tier 2 diesel eng-gen - 2,220 HP <sup>1,2,5</sup> (2003)	809.8	9.98	152.6	0.62	41.1	39.46	38.51
14883A Port. Emer. Tier 3 diesel eng-gen set - 98 HP <sup>1,2</sup> (2011)	10.67	0.57	4.61	0.02	0.67	0.64	0.63
16163A AST GDF <sup>3</sup> (1984)							
MOD-26-00003/GNR-0017433A Portable prime Isuzu diesel engine-pump set #1 - 61.7 HP <sup>1,2</sup> (2026)	8.68	0.05	0.02	0.01	0.05	0.05	0.05
GNR-0017895 Advanced water purification facility <sup>4</sup> (2019)							
GNR-0017896 Advanced water demonstration purification facility <sup>4</sup> (2019)							
GNR-0018026 Fume hood (1990)		1.10					
GNR-0018242 Emer. Tier 4F diesel eng-gen - 65 HP <sup>1</sup> (2016)	9.52	0.52	0.24	0.02	0.03	0.03	0.03
GNR-0018289/MOD-21-00054 Wastewater treat. & reclamation (1982)		78.19					
GNR-0018290 Port Tier 4F diesel eng-pump set - 61 HP <sup>1</sup> (2019)	4.29	0.02	0.11	0.01	0.02	0.02	0.02
GNR-0018362 Digester gas gen. set #1 <sup>1,5</sup> (1984)	57.6	33.6	168	14.64	1.41	1.41	1.41
GNR-0018363 Digester gas gen. set #2 <sup>1,5</sup> (1992)	57.6	33.6	168	14.64	1.41	1.41	1.41
GNR-0018364 Digester gas gen. set #3 <sup>1,5</sup> (1992)	57.6	33.6	168	14.64	1.41	1.41	1.41

Permit 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> (lb/day)	PM <sub>2.5</sub> (lb/day)
GNR-0018365 Dig. gas flare <sup>1,5</sup> (1987)	28.50	38.92	155.68	34.31	7.94	7.94	7.94
GNR-0018366 Boiler nat/digester gas 8.369MMBtu/hr <sup>1,5,6</sup> (1982)	19.7	1.1	16.5	0.1	1.5	1.5	1.5
GNR-0018367 Port. Tier 3 diesel eng-sludge lagoon barge low-use - 202 HP <sup>1,2,5</sup> (1995)	27.87	0.85	14.31	0.07	1.17	1.12	1.1
GNR-0018368 Port emer. Tier 1 diesel eng-gen - 1,114 HP (To be replaced by APP-26-00013 & APP-26-00014)							
PTO-23-00016 Port prime sewer pump rated @ 74 HP (2023)	4.99	0.26	0.73	0.01	0.01	0.01	0.01
APP-25-00014 Co-digestion food waste processing-carbon filters (2025)		8.38					
APP-25-00095 Emer. nat. gas gen. rated - 132 HP (2025)	1.26	0.21	1.47	0.02	0.30	0.29	0.29
APP-25-00105 Linear generator - 250 KW (2025)	0.48	0.66	1.39	0.03	0.13	0.13	0.13
APP-26-00011 Portable prime Isuzu diesel engine-pump set #2 - 61.7 HP <sup>1,2</sup> (2026)	8.68	0.05	0.02	0.01	0.05	0.05	0.05
APP-26-00013 Prime diesel engine-gen set #1 – 825 HP <sup>1,2</sup> (2026)	11.69	0.31	3.27	0.16	0.65	0.62	0.61
APP-26-00014 Prime diesel engine-gen set #2 – 825 HP <sup>1,2</sup> (2026)	11.69	0.31	3.27	0.16	0.65	0.62	0.61
Total:	1,352.12	246.08	918.22	79.59	76.50	72.49	2.43
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. For nat. gas boilers: PM<sub>10</sub> = 1.0 PM & PM<sub>2.5</sub> = 1.0 PM. For gaseous material combustion (digester gas flare and engines): PM<sub>10</sub> = 1.0 PM & PM<sub>2.5</sub> = 1.0 PM.

<sup>2</sup> SO<sub>x</sub> emissions based upon low-sulfur diesel fuel of 15 ppm, or 2.5E-04 lb SO<sub>x</sub>/gal of diesel, and the fuel consumption rate of each diesel engine. PTO 7945B max fuel consumption rate is 19.3 gal/hr. PTO 11806A max fuel consumption rate is 103.6 gal/hr. PTO GNR-0018367 max fuel consumption rate is 12 gal/hr. Sample calculation for PTO GNR-0018367: [(12 gal/hr) (24 hr/day) (2.5E-04 lb SO<sub>x</sub>/gal of diesel) = 0.07 lb SO<sub>x</sub>/day].

<sup>3</sup> Pursuant to Rule 207, Section 1.3.1, gasoline storage and dispensing equipment subject to Rules 418 and Rule 1002 shall be exempt from the requirements of Rule 207. The gas station is subject to Rules 418 and 1002 and is exempt from Rule 207.

<sup>4</sup> The advanced water purification facilities are not a source of criteria pollutants. The facilities are permitted for use of ozone generators.

<sup>5</sup> Equipment pre-dates NSR PM<sub>2.5</sub> applicability date of October 20, 2010.

<sup>6</sup> Equipment pre-dates NSR PM<sub>10</sub> applicability date of August 19, 1983.

Table 6 shows that the facility’s new emission increases exceed the NO<sub>x</sub>, VOC, and CO BACT thresholds of Rule 207, Table 4.1.1.

Per MBARD’s policy, the South Coast Air Quality Management District’s (SCAQMD) BACT Guidelines

will be used. A search of [SCAQMD LAER/BACT determinations](#) did not find determinations made for portable engine-generator sets. There is a BACT determination for a portable engine driving a landfill refuse truck tipper rated at 123.4 HP under application 594294 that required the engine meet Tier 4 Final emission standards. SCAQMD's "[Part D: BACT Guidelines For Non-Major Polluting Facilities](#)" requires that portable engine-generator sets rated at  $750 \leq \text{HP} \leq 1,200$  meet Tier 4 Interim emission standards. However, pursuant to the California Air Resources Board (CARB) Air Toxic Control Measure (ATCM) for portable diesel engines rated at 50 horsepower and greater Section 93116.3(b)(2), portable diesel engines that have not been permitted or registered prior to November 30, 2018, shall not be permitted or registered unless they are certified to the most stringent contained in the federal or California emission standards for nonroad engines, which requires new engines meet Tier 4 Final emission standards. The proposed model year 2023 Volvo Penta TWD1672G diesel engines are certified to Tier 4 Final standards and meet the BACT requirements.

*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 (lb/day) or more of VOCs or NO<sub>x</sub>. Table 7 shows that the proposed project does not trigger the CA BACT thresholds of Section 5.2.

Table 7. California BACT determination.

Pollutant	BACT threshold (lb/day)	Project emissions (lb/day)	BACT triggered?
NO <sub>x</sub>	25	11.69	No
VOC	25	0.31	No

*Federal Offset requirements*

Pursuant to Rule 207, Section 4.2, Offsets are required for any new or modified source with net emissions increases equal to exceeding the thresholds of Table 4.2.2. Pursuant to Section 4.2.6, increases in emissions shall be determined in accordance with the calculation methods described in Subsections 2.36.1, 2.36.2, 2.36.3, Sections 7.3, 7.4, and 7.5 of this Rule.

Pursuant to Section 2.36.1, a net emissions increase is the sum of all increases in potential emissions of any given pollutant except PM<sub>2.5</sub> or PM<sub>10</sub> from a new or modified stationary source occurring since July 15, 1976, minus reductions in emissions of that pollutant at the stationary source occurring since July 15, 1976. Pursuant to Section 2.36.3, the sum of all increases in potential emissions of PM<sub>10</sub>, from a new or modified stationary source occurring since August 19, 1983, minus any reduction in emissions of PM<sub>10</sub> at the stationary source occurring since August 19, 1983.

Table 8 shows the emissions from the proposed project, the net emissions increases at the Regional Treatment Plant, and the offset thresholds of Table 4.2.2.

Table 8. Net emissions increases at the proposed locations.

Permit/Application no.:	NO <sub>x</sub> <sup>1</sup> (lb/day)	VOC (lb/day)	CO (lb/day)	SO <sub>x</sub> (lb/day)	PM (lb/day)	PM <sub>10</sub> (lb/day)
7945B Emer. ICE gen. rated @ 449 HP <sup>2</sup> (1997)						
11806A Emer. ICE gen. rated @ 2,220 HP <sup>2</sup> (2003)						
14883A Port. Emer. Gen. set rated at 98 HP <sup>2</sup> (2011)						

Permit/Application no.:	NO <sub>x</sub> <sup>1</sup> (lb/day)	VOC (lb/day)	CO (lb/day)	SO <sub>x</sub> (lb/day)	PM (lb/day)	PM <sub>10</sub> (lb/day)
<b>16163A AST GDF<sup>3</sup> (1984)</b>						
<b>MOD-26-00003/GNR-0017433A Portable prime Isuzu diesel engine- pump set #1 - 61.7 HP<sup>4,5,6</sup> (2026)</b>	<b>8.68</b>	<b>0.05</b>	<b>0.02</b>	<b>0.01</b>	<b>0.05</b>	<b>0.05</b>
GNR-0017895 Advanced water purification facility <sup>7</sup> (2019)						
GNR-0017896 Advanced water demonstration purification facility <sup>7</sup> (2019)						
GNR-0018026 Fume hood <sup>8</sup> (1990)		1.1				
<b>GNR-0018242 Emer. ICE gen. set rated @ 65 HP<sup>2</sup> (2016)</b>						
GNR-0018289/MOD-21-00054 Wastewater treat. & reclamation (1982) <sup>8,9</sup>		78.19				
GNR-0018290 Portable low-use ICE engine- pump set rated @ 61 HP <sup>4,5,6</sup> (2019)	4.29	0.02	0.11	0.01	0.02	0.02
<b>GNR-0018362 Digester gas gen. set #1<sup>4,6</sup> (1984)</b>	<b>57.6</b>	<b>33.6</b>	<b>168</b>	<b>14.64</b>	<b>1.41</b>	<b>1.41</b>
<b>GNR-0018363 Digester gas gen. set #2<sup>4,6</sup> (1992)</b>	<b>57.6</b>	<b>33.6</b>	<b>168</b>	<b>14.64</b>	<b>1.41</b>	<b>1.41</b>
<b>GNR-0018364 Digester gas gen. set #3<sup>4,6</sup> (1992)</b>	<b>57.6</b>	<b>33.6</b>	<b>168</b>	<b>14.64</b>	<b>1.41</b>	<b>1.41</b>
<b>GNR-0018365 Dig. gas flare<sup>4,6</sup> (1987)</b>	<b>28.5</b>	<b>38.92</b>	<b>155.68</b>	<b>34.31</b>	<b>7.94</b>	<b>7.94</b>
<b>GNR-0018366 Boiler nat. gas fired<sup>4,6,10</sup> (1982)</b>	<b>19.7</b>	<b>1.1</b>	<b>16.5</b>	<b>0.1</b>	<b>1.5</b>	<b>1.5</b>
GNR-0018367 Port. sludge lagoon barge rated @ 202 HP <sup>4,5,6</sup> (1995)	27.87	0.85	14.31	0.07	1.17	1.12
<b>GNR-0018368 Port emer. Tier 1 diesel eng-gen - 1,114 HP (To be replaced by APP-26-00013 &amp; APP-26-00014)</b>						
PTO-23-00016 Port prime sewer pump rated @ 74 HP <sup>4,5,6</sup> (2023)	4.99	0.26	0.73	0.01	0.01	0.01
APP-25-00014 Co-digestion food waste processing-carbon filters (2025)		8.38				
APP-25-00095 Emer. nat. gas gen. rated - 132 HP <sup>2</sup> (2025)						
APP-25-00105 Linear generator - 250 KW (2025)	0.48	0.66	1.39	0.03	0.13	0.13
<b>APP-26-00011 Portable prime Isuzu diesel engine-pump set #2 - 61.7 HP<sup>4,5,6</sup> (2026)</b>	<b>8.68</b>	<b>0.05</b>	<b>0.02</b>	<b>0.01</b>	<b>0.05</b>	<b>0.05</b>

Permit/Application no.:	NO <sub>x</sub> <sup>1</sup> (lb/day)	VOC (lb/day)	CO (lb/day)	SO <sub>x</sub> (lb/day)	PM (lb/day)	PM <sub>10</sub> (lb/day)
APP-26-00013 Prime diesel engine-set #1 – 825 HP <sup>4,5,6</sup> (2026)	11.69	0.31	3.27	0.16	0.65	0.62
APP-26-00014 Prime diesel engine-set #2 – 825 HP <sup>4,5,6</sup> (2026)	11.69	0.31	3.27	0.16	0.65	0.62
Total:	299.37	231.00	699.30	78.79	16.40	14.79
Rule 207: Table 4.2.2 Offset Threshold:	150	150	550	150	150	82

<sup>1</sup> The facility is permitted with a daily NO<sub>x</sub> emission limit of 221 pounds per day (40.33 tons per year) from sources subject to offset requirements. The facility has been subject to Offsets since the initial permitting of the facility. The sources highlighted in **bold** are the sources subject to the facility daily NO<sub>x</sub> limit of 221 lbs/day. The facility must keep records to demonstrate the daily emissions from all the equipment, except for equipment subject to the offset exemptions of Rule 207, does not exceed 221 pounds per day.

<sup>2</sup> Pursuant to Rule 207, Section 1.3.3, the offset requirements of Sections 4.2 and 5.3 do not apply to emergency internal combustion engine that is either only used for emergency power when normal power line services fail, or are used only for the emergency pumping of water, and are operated less than 60 hours per year for testing and exercise.

<sup>3</sup> Pursuant to Rule 207, Section 1.3.1, gasoline storage and dispensing equipment subject to Rules 418 and Rule 1002 shall be exempt from the requirements of Rule 207. The gas station is subject to Rules 418 and 1002 and is exempt from Rule 207.

<sup>4</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. For nat. gas boilers: PM<sub>10</sub> = 1.0 PM & PM<sub>2.5</sub> = 1.0 PM. For gaseous material combustion (digester gas flare and engines): PM<sub>10</sub> = 1.0 PM & PM<sub>2.5</sub> = 1.0 PM.

<sup>5</sup> SO<sub>x</sub> emissions based upon low-sulfur diesel fuel of 15 ppm, or 2.5E-04 lb SO<sub>x</sub>/gal of diesel, and the fuel consumption rate of each diesel engine. PTO 7945B max fuel consumption rate is 19.3 gal/hr. PTO 11806A max fuel consumption rate is 103.6 gal/hr. PTO GNR-0018367 max fuel consumption rate is 12 gal/hr. Sample calculation for PTO GNR-0018367: [(12 gal/hr) (24 hr/day) (2.5E-04 lb SO<sub>x</sub>/gal of diesel) = 0.07 lb SO<sub>x</sub>/day].

<sup>6</sup> The equipment is subject to facility-wide emissions limits for NO<sub>x</sub>, VOC and CO. For NO<sub>x</sub>, the facility-wide limit is 221 pounds per day. For CO, the facility-wide limit is 676.18 pounds per day. For VOC, the facility-wide emission limit is 220.98 pounds per day.

<sup>7</sup> The advanced water purification facilities are not a source of criteria pollutants. The facilities are permitted for the use of ozone generators.

<sup>8</sup> Prior to the issuance of ATC GNR-017527 for the modification of M1W’s Wastewater Treatment & Reclamation Plant on March 2020, the emissions from the treatment plant were not estimated. Per California Health & Safety Code Section 42301.2, the use of new emission factors represented a change in technique to quantify the wastewater treatment plant emissions and emission offsets were not required. Accordingly, the baseline emissions as of March 2020 for VOC emissions equated to 221.71 pounds per day.

<sup>9</sup> The equipment is subject to facility-wide emissions limits for NO<sub>x</sub> and CO. For NO<sub>x</sub>, the facility-wide limit is 221 pounds per day. For CO, the facility-wide limit is 676.18 pounds per day.

<sup>10</sup> Pre-dates NSR PM<sub>10</sub> applicability date of August 19, 1983.

Table 8 shows that the facility exceeds the Offset thresholds of Table 4.2.2 for NO<sub>x</sub>, VOC and CO.

M1W is proposing to internally offset the emissions from the proposed project. As noted in the Proposal section above, M1W has proposed to limit the operation of the three (3) digester gas cogeneration engines (PTOs GNR-0018362, GNR-0018363, and GNR-0018364) to only (2) of the three (3) units while the new Yanmar twin-pack diesel engine-generator is operating at the RTP. The digester gas cogeneration engines are part of a list of equipment that are subject to a daily NO<sub>x</sub> emission limit of 221 pounds per day. Thus, the new Yanmar twin-pack diesel engine-generator will be subject to the daily NO<sub>x</sub> emission limit. MBARD is proposing to add the following permit condition.

- The total oxides of nitrogen emissions, as NO<sub>2</sub>, from the equipment below operating at the Monterey One Water Regional Wastewater Treatment Plant shall not exceed 221 pounds per day; excluding emissions from units exempted from the Offset requirements of Rule 207. The NO<sub>x</sub> emissions for

the Volvo Penta TWD 1672 GE Tier 4 Final diesel engine shall be based on the engine’s NO<sub>x</sub> emissions factor of 0.268 grams per brake horse power-hour or 0.49 pounds per hour. [Basis: SIP Rule 207 Offsets]

- a) The Yanmar Portable Prime twin-pack diesel engine-generator set powered by the following two Tier 4 Final diesel engines:
  - i. Volvo Penta Tier 4 Final diesel engine under Authority to Construct, APP-26-00013.
  - ii. Volvo Penta Tier 4 Final diesel engine under Authority to Construct APP-26-00014.
- b) The natural gas/digester gas fired cogeneration engine sets #1, #2, & #3, under latest permit to operate GNR-0018362, GNR-0018363, and GNR-0018364, respectively.
- c) Digester waste gas candle stick flares under latest permit to operate GNR-0018365.
- d) The natural gas/digester gas fired boiler under latest permit to operate GNR-0018366.
- e) Portable sludge lagoon barge engine under latest permit to operate GNR-0018367.
- f) Portable prime pump under this permit, latest permit to operate GNR-0017433.
- g) Portable prime water pump under latest permit to operate GNR-0018290.
- h) Portable prime sewer pump under latest permit to operate PTO-23-00016.
- i) Portable prime pump under latest Authority to Construct APP-26-00011.

Since the facility has also exceeded the offset thresholds for VOC and CO, MBARD is proposing to add new permit conditions limiting the facility-wide emissions for VOC and CO. The facility has been subject to Offsets since the initial permitting of the facility. Table 9 shows the sources that were part of the original permitting process and were used to set the NO<sub>x</sub> facility-wide limit of 221 pounds per day.

Table 9. Sources in original permitting process.

Permit/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> (lb/day)
GNR-0018362 Digester gas gen. set #1 (1984)	57.6	33.6	168	14.64	1.41	1.41
GNR-0018363 Digester gas gen. set #2 (1984)	57.6	33.6	168	14.64	1.41	1.41
GNR-0018364 Digester gas gen. set #3 (1984)	57.6	33.6	168	14.64	1.41	1.41
GNR-0018365 Dig. gas flare (1987)	28.5	38.92	155.68	34.31	7.94	7.94
GNR-0018366 Boiler nat. gas fired <sup>1</sup> (1982)	19.7	1.1	16.5	0.1	1.5	<del>1.5</del>
<b>Total</b>	<b>221.00</b>	<b>140.82</b>	<b>676.18</b>	<b>78.33</b>	<b>13.67</b>	<b>12.17</b>
Rule 207: Table 4.2.2 Offset Threshold:	150	150	550	150	150	82

<sup>1</sup> Pre-dates NSR PM<sub>10</sub> applicability date of August 19, 1983.

The facility-wide emissions for VOC and CO will be based on the sources in the facility’s original permitting process and shown in Table 9.

*CO Facility-wide condition:*

As shown in Table 9, the CO emissions exceeded the offset threshold of 550 pounds per day. MBARD proposes adding a facility-wide CO emissions limit of 676.18 pounds per day. The proposed condition is as follows:

- The total carbon monoxide (CO) emissions from the equipment below operating at the Monterey One Water Regional Wastewater Treatment Plant shall not exceed 676.18 pounds per day; excluding emissions from units exempted from the Offset requirements of Rule 207. The CO emissions for the Volvo Penta TWD 1672 GE Tier 4 Final diesel engine shall be based on the engine’s CO emissions factor of 0.075 grams per brake horse power-hour or 0.14 pounds per hour. [Basis: SIP Rule 207 Offsets]
  - a) The Yanmar Portable Prime twin-pack diesel engine-generator set powered by the following two Tier 4 Final diesel engines:
    - i. Volvo Penta Tier 4 Final diesel engine under Authority to Construct, APP-26-00013.
    - ii. Volvo Penta Tier 4 Final diesel engine under Authority to Construct APP-26-00014.
  - b) The natural gas/digester gas fired cogeneration engine sets #1, #2, & #3, under latest permit to operate GNR-0018362, GNR-0018363, and GNR-0018364, respectively.
  - c) Digester waste gas candle stick flares under latest permit to operate GNR-0018365.
  - d) The natural gas/digester gas fired boiler under latest permit to operate GNR-0018366.
  - e) Portable sludge lagoon barge engine under latest permit to operate GNR-0018367.
  - f) Portable prime pump under this permit, latest permit to operate GNR-0017433.
  - g) Portable prime water pump under latest permit to operate GNR-0018290.
  - h) Portable prime sewer pump under latest permit to operate PTO-23-00016.
  - i) Portable prime pump under latest Authority to Construct APP-26-00011.

*VOC Facility-wide condition:*

As shown in Table 9, the VOC emissions did not exceed the offset threshold of 150 pounds per day. At the time of the original permitting process, the VOC emissions from the wastewater treatment plant were not estimated. Prior to the issuance of ATC GNR-017527 for the modification of M1W’s Wastewater Treatment & Reclamation Plant on March 2020, the emissions from the treatment plant were not estimated. Table 10 shows the existing sources subject to offsets permitted prior to March 2020, which shows that the facility exceeds the VOC offset threshold of 150 pounds per day.

Table 10. Existing sources subject to offsets permitted prior to March 2020.

Permit No.:	VOC (lb/day)
GNR-0018289/MOD-21-00054 Wastewater treat. & reclamation (1982) <sup>1</sup>	78.19
GNR-0018362 Digester gas gen. set #1 (1984)	33.60
GNR-0018363 Digester gas gen. set #2 (1992)	33.60
GNR-0018364 Digester gas gen. set #3 (1992)	33.60
GNR-0018365 Dig. gas flare (1987)	38.92
GNR-0018366 Boiler nat. gas fired (1982)	1.10
GNR-0018026 Fume hood (1990)	1.10
GNR-0018367A Port. Tier 3 diesel eng-sludge lagoon barge low-use - 202 HP (1995)	0.85
GNR-0018290 Portable Tier 4F diesel engine-pump set - 61 HP (2019)	0.02
<b>Total</b>	<b>220.98</b>
Rule 207: Table 4.2.2 Offset Threshold:	150

<sup>1</sup> Prior to the issuance of ATC GNR-017527 for the modification of M1W’s Wastewater Treatment & Reclamation Plant on March 2020, the emissions from the treatment plant were not estimated.

MBARD proposes adding a facility-wide VOC emission limit of 220.98 pounds per day. The proposed conditions is as follows:

- The total volatile organic compounds (VOC) emissions from the equipment below operating at the Monterey One Water Regional Wastewater Treatment Plant shall not exceed 220.98 pounds per day; excluding emissions from units exempted from the Offset requirements of Rule 207. The VOC emissions for the Volvo Penta TWD 1672 GE Tier 4 Final diesel engine shall be based on the engine’s VOC emissions factor of 0.007 grams per brake horse power-hour or 0.01 pounds per hour. [Basis: SIP Rule 207 Offsets]
  - a) The Yanmar Portable Prime twin-pack diesel engine-generator set powered by the following two Tier 4 Final diesel engines:
    - i. Volvo Penta Tier 4 Final diesel engine under Authority to Construct, APP-26-00013.
    - ii. Volvo Penta Tier 4 Final diesel engine under Authority to Construct APP-26-00014.
  - b) The natural gas/digester gas fired cogeneration engine sets #1, #2, & #3, under latest permit to operate GNR-0018362, GNR-0018363, and GNR-0018364, respectively.
  - c) Digester waste gas candle stick flares under latest permit to operate GNR-0018365.
  - d) The natural gas/digester gas fired boiler under latest permit to operate GNR-0018366.
  - e) Portable sludge lagoon barge engine under latest permit to operate GNR-0018367.
  - f) Portable prime pump under this permit, latest permit to operate GNR-0017433.
  - g) Portable prime water pump under latest permit to operate GNR-0018290.
  - h) Portable prime sewer pump under latest permit to operate PTO-23-00016.
  - i) Portable prime pump under latest Authority to Construct APP-26-00011.

MIW Contemporaneous Projects at the RTP Site

MIW has been issued for two projects that were subject to the offset requirements of Rule 207 and include ATC APP-25-00014 for the co-digestion project/food waste processing facility on August 4, 2025, and ATC APP-25-00105 for the prime natural gas linear generator on October 17, 2025. For both projects it was determined that the required offset thresholds were below MBARD’s Policy for Rounding, dated April 18, 2017, which is to round up to the tenth place and to the nearest whole number. For informational purposes only, the PTE emission increases for the projects are presented below.

Table 11 shows the PTE emissions increases for the co-digestion project/food waste processing facility.

Table 11. Co-digestion project/food waste processing quarterly VOC emissions.

Pollutant	1 <sup>st</sup> Qtr (ton/Qtr.)	2 <sup>nd</sup> Qtr (ton/Qtr.)	3 <sup>rd</sup> Qtr (ton/Qtr.)	4 <sup>th</sup> Qtr (ton/Qtr.)
VOC	0.38	0.38	0.39	0.39

Table 12 shows the PTE emissions increases for the non-emergency natural gas linear generator on a quarterly basis.

Table 12. Non-emergency natural gas linear generator quarterly emissions.

Pollutant	1 <sup>st</sup> Qtr (ton/Qtr.)	2 <sup>nd</sup> Qtr (ton/Qtr.)	3 <sup>rd</sup> Qtr (ton/Qtr.)	4 <sup>th</sup> Qtr (ton/Qtr.)
NO <sub>x</sub>	0.02	0.02	0.02	0.02
VOC	0.03	0.03	0.03	0.03
CO	0.06	0.06	0.06	0.06

Table 13 shows the contemporaneous emissions for the facility from the last five years, that include the natural gas linear generator and the co-digestion project/food waste processing facility.

Table 13. Contemporaneous emissions from natural gas linear generator + co-digestion project/food

waste processing facility.

Pollutant	1 <sup>st</sup> Qtr (ton/Qtr.)	2 <sup>nd</sup> Qtr (ton/Qtr.)	3 <sup>rd</sup> Qtr (ton/Qtr.)	4 <sup>th</sup> Qtr (ton/Qtr.)
NO <sub>x</sub>	0.02	0.02	0.02	0.02
VOC	0.41	0.41	0.42	0.42
CO	0.06	0.06	0.06	0.06

*CA Offset requirements*

Pursuant to Section 5.3.1, any new or modified stationary source with a potential to emit 137 pounds per day or more of VOCs or NO<sub>x</sub> shall be required to provide offsets at the ratios specified in Section 4.3. Pursuant to Section 2.38, for the purpose of Part 5 of this Rule (California Clean Air Act), the applicability date shall be April 21, 1993. Table 14 shows the facility-wide potential emissions, the emissions from the proposed project, and the CA offset thresholds of Section 5.3.1.

Table 14. Facility-wide potential to emit emissions and CA offset determination.

Permit No.:	NO <sub>x</sub> <sup>1</sup> (lb/day)	VOC (lb/day)
7945B Emer. Tier 0 diesel eng-gen - 449 HP <sup>2</sup> (1997)		
11806A Emer. Tier 2 diesel eng-gen - 2,220 HP <sup>2</sup> (2003)		
14883A Port. Emer. Tier 3 diesel eng-gen set - 98 HP <sup>2</sup> (2011)		
16163A AST GDF <sup>3</sup> (1984)		
MOD-26-00003/GNR-0017433A Portable prime Isuzu diesel engine-pump set #1 - 61.7 HP (2026)	8.68	0.05
GNR-0017895 Advanced water purification facility <sup>4</sup> (2019)		
GNR-0017896 Advanced water demonstration purification facility <sup>4</sup> (2019)		
GNR-0018026 Fume hood <sup>5</sup> (1990)		
GNR-0018242 Emer. Tier 4F diesel eng-gen - 65 HP <sup>2</sup> (2016)		
GNR-0018289/MOD-21-00054 Wastewater treat. & reclamation <sup>5</sup> (1982)		
GNR-0018290 Port Tier 4F diesel eng-pump set - 61 HP (2019)	4.29	0.02
GNR-0018362 Digester gas gen. set #1 <sup>5</sup> (1984)		
GNR-0018363 Digester gas gen. set #2 <sup>5</sup> (1992)		
GNR-0018364 Digester gas gen. set #3 <sup>5</sup> (1992)		
GNR-0018365 Dig. gas flare <sup>5</sup> (1987)		
GNR-0018366 Boiler nat/digester gas 8.369MMBtu/hr <sup>5</sup> (1982)		
GNR-0018367A Port. Tier 3 diesel eng-sludge lagoon barge low-use - 202 HP (1995)	27.87	0.85
GNR-0018368 Port emer. Tier 1 diesel eng-gen - 1,114 HP (To be replaced by APP-26-00013 & APP-26-00014)		
PTO-23-00016 Port prime Tier 4F diesel eng-sewer pump - 74 HP (2023)	4.99	0.26
APP-25-00014 Co-digestion food waste processing-carbon filters (2025)		8.38
APP-25-00095 Emer. nat. gas gen. rated - 132 HP <sup>2</sup> (2025)		
APP-25-00105 Linear generator - 250 KW (2025)	0.48	0.66
APP-26-00011 Portable prime Isuzu diesel engine-pump set #2 - 61.7 HP (2026)	8.68	0.05
APP-26-00013 Prime diesel engine-gen set #1 – 825 HP (2026)	11.69	0.31
APP-26-00014 Prime diesel engine-gen set #2 – 825 HP (2026)	11.69	0.31
<b>Total</b>	<b>78.37</b>	<b>10.89</b>
Section 5.3.1 Offset thresholds	137	137

<sup>1</sup> The facility is permitted with a daily NO<sub>x</sub> emission limit of 221 pounds per day (40.33 tons per year) from sources subject to offset requirements. The facility has been subject to Offsets since the initial permitting of the facility. **The sources highlighted in Bold are the sources subject to the facility daily NO<sub>x</sub> limit of 221 lbs/day.** The facility must keep records to demonstrate the daily emissions from all the equipment, except for equipment subject to the offset exemptions of Rule 207, does not exceed

221 pounds per day.

<sup>2</sup> Pursuant to Rule 207, Section 1.3.3, the offset requirements of Sections 4.2 and 5.3 do not apply to emergency internal combustion engine that is either only used for emergency power when normal power line services fail, or are used only for the emergency pumping of water, and are operated less than 60 hours per year for testing and exercise.

<sup>3</sup> Pursuant to Rule 207, Section 1.3.1, gasoline storage and dispensing equipment subject to Rules 418 and Rule 1002 shall be exempt from the requirements of Rule 207. The gas station is subject to Rules 418 and 1002 and is exempt from Rule 207.

<sup>4</sup> The advanced water purification facilities are not a source of criteria pollutants. The facilities are permitted for the use of ozone generators.

<sup>5</sup> Pursuant to Rule 207, Section 2.38, for the purposes of Part 5 of this rule, which includes CA Offset requirements, the applicability date shall be April 21, 1993. Thus, equipment installed prior to April 21, 1993, is excluded.

Table 14 shows that the facility-wide emissions do not exceed the CA offset threshold of Section 5.3.1.

### ***Publication and Public Comment***

MBARD is required, pursuant to Section 6.9, to publish in at least one newspaper of general circulation in MBARD's jurisdiction a notice stating the preliminary decision on a source's application for a modification where the offset thresholds of Section 4.2 or 5.3 are exceeded. MBARD will comply with the requirements of Section 6.9 and issue the public notice in a local newspaper and will post the public notice on MBARD's webpage. The public notice will invite written public comment for a 30-day period following the date of publication.

### 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 7, each of the proposed portable Volvo Penta prime Tier 4 Final diesel engines do not exceed the BACT thresholds of Section 4.1.1.

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 pollutant levels listed in Table 4.1.1.

Table 15 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 15. Facility-wide emissions and BACT thresholds of Table 4.1.1.

Permit 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> (lb/day)	PM <sub>2.5</sub> (lb/day)
7945B Emer. Tier 0 diesel eng-gen - 449 HP <sup>1,2</sup> (1997)	221.50	3.80	60.00	0.12	18.00	17.28	16.87
11806A Emer. Tier 2 diesel eng-gen - 2,220 HP <sup>1,2</sup> (2003)	809.80	9.98	152.60	0.62	41.10	39.46	38.51
14883A Port. Emer. Tier 3 diesel eng-gen set - 98 HP <sup>1,2</sup> (2011)	10.67	0.57	4.61	0.02	0.67	0.64	0.63
<b>16163A AST GDF<sup>3</sup> (1984)</b>							
<b>MOD-26-00003/GNR-0017433A Portable prime diesel Isuzu engine-pump set #1 - 61.7 HP<sup>1,2</sup> (2026)</b>	<b>8.68</b>	<b>0.05</b>	<b>0.02</b>	<b>0.01</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>
GNR-0017895 Advanced water purification facility <sup>4</sup>							
GNR-0017896 Advanced water demonstration purification facility <sup>4</sup>							
GNR-0018026 Fume hood (1990)		1.10					
GNR-0018242 Emer. Tier 4F diesel eng-gen - 65 HP <sup>1</sup> (2016)	9.52	0.52	0.24	0.02	0.03	0.03	0.03
GNR-0018289/MOD-21-00054 Wastewater treat. & reclamation (1982)		78.19					
GNR-0018290 Port Tier 4F diesel eng-pump set - 61 HP <sup>1</sup> (2019)	4.29	0.02	0.11	0.01	0.02	0.02	0.02
GNR-0018362 Digester gas gen. set #1 <sup>1</sup> (1984)	57.60	33.60	168.00	14.64	1.41	1.41	1.41
GNR-0018363 Digester gas gen. set #2 <sup>1</sup> (1992)	57.60	33.60	168.00	14.64	1.41	1.41	1.41
GNR-0018364 Digester gas gen. set #3 <sup>1</sup> (1992)	57.60	33.60	168.00	14.64	1.41	1.41	1.41
GNR-0018365 Dig. gas flare <sup>1</sup> (1987)	28.50	38.92	155.68	34.31	7.94	7.94	7.94
GNR-0018366 Boiler nat/digester gas 8.369MMBtu/hr <sup>1</sup> (1982)	19.70	1.10	16.50	0.10	1.50	1.50	1.50
GNR-0018367 Port. sludge lagoon barge rated @ 202 HP <sup>1,2</sup> (1995)	27.87	0.85	14.31	0.07	1.17	1.12	1.10
<b>GNR-0018368 Port emer. Tier 1 diesel eng-gen - 1,114 HP (To be replaced by APP-26-00013 &amp; APP-26-00014)</b>							
PTO-23-00016 Port prime Tier 4F diesel eng-sewer pump - 74 HP (2023)	4.99	0.26	0.73	0.01	0.01	0.01	0.01
APP-25-00014 Co-digestion food waste processing-carbon filters (2025)		8.38					

Permit 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> (lb/day)	PM <sub>2.5</sub> (lb/day)
APP-25-00095 Emer. nat. gas gen. rated - 132 HP (2025)	1.26	0.21	1.47	0.02	0.30	0.29	0.29
APP-25-00105 Linear generator - 250 KW (2025)	0.48	0.66	1.39	0.03	0.13	0.13	0.13
APP-26-00011 Portable prime Isuzu diesel engine-pump set #2 - 61.7 HP <sup>1,2</sup> (2026)	8.68	0.05	0.02	0.01	0.05	0.05	0.05
APP-26-00013 Prime diesel engine-gen set #1 – 825 HP <sup>1,2</sup> (2026)	11.69	0.31	3.27	0.16	0.65	0.62	0.61
APP-26-00014 Prime diesel engine-gen set #2 – 825 HP <sup>1,2</sup> (2026)	11.69	0.31	3.27	0.16	0.65	0.62	0.61
<b>Total:</b>	<b>1,352.12</b>	<b>246.08</b>	<b>918.22</b>	<b>79.59</b>	<b>76.50</b>	<b>73.99</b>	<b>72.58</b>
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. For nat. gas boilers: PM<sub>10</sub> = 1.0 PM & PM<sub>2.5</sub> = 1.0 PM. For gaseous material combustion (digester gas flare and engines): PM<sub>10</sub> = 1.0 PM & PM<sub>2.5</sub> = 1.0 PM.

<sup>2</sup> SO<sub>x</sub> emissions based upon low-sulfur diesel fuel of 15 ppm, or 2.5E-04 lb SO<sub>x</sub>/gal of diesel, and the fuel consumption rate of each diesel engine. PTO 7945B max fuel consumption rate is 19.3 gal/hr. PTO 11806A max fuel consumption rate is 103.6 gal/hr. PTO GNR-0018367 max fuel consumption rate is 12 gal/hr. Sample calculation for PTO GNR-0018367: [(12 gal/hr) (24 hr/day) (2.5E-04 lb SO<sub>x</sub>/gal of diesel) = 0.07 lb SO<sub>x</sub>/day].

<sup>3</sup> Pursuant to Rule 207, Section 1.3.1, gasoline storage and dispensing equipment subject to Rules 418 and Rule 1002 shall be exempt from the requirements of Rule 207. The gas station is subject to Rules 418 and 1002 and is exempt from Rule 207.

<sup>4</sup> The advanced water purification facilities are not a source of criteria pollutants. The facilities are permitted for the use of ozone generators.

Table 15 shows that the facility exceeds the BACT thresholds of Rule 207 for NO<sub>x</sub>, VOC, CO, and PM<sub>2.5</sub>. As noted above the proposed model year 2023 Volvo Penta TWD1672G diesel engines meets SCAQMD’s BACT guidelines for portable engine-generator sets rated 750 ≤ HP ≤ 1,200.

*Offset requirements*

Pursuant Section 4.2, Offsets are required for any new or modified source, which has the potential to emit greater than or equal to the thresholds of any affected polluted listed in Table 4.2.1.

Table 16 shows the emissions from the new project, the facility-wide emissions and the offset thresholds of Section 4.2, Table 4.2.1. The table shows that the proposed project does not exceed the Offset thresholds of Section 4.2, Table 4.2.1.

Table 16. Facility-wide emissions and offset analysis.

Permit/Application no.:	NO <sub>x</sub> <sup>1</sup> (lb/day)	VOC (lb/day)	CO (lb/day)	SO <sub>x</sub> (lb/day)	PM (lb/day)	PM <sub>10</sub> (lb/day)
7945B Emer. Tier 0 diesel eng-gen - 449 HP <sup>2</sup> (1997)						
11806A Emer. Tier 2 diesel eng-gen - 2,220 HP <sup>2</sup> (2003)						
14883A Port. Emer. Tier 3 diesel eng-gen set - 98 HP <sup>2</sup> (2011)						

Permit/Application no.:	NO <sub>x</sub> <sup>1</sup> (lb/day)	VOC (lb/day)	CO (lb/day)	SO <sub>x</sub> (lb/day)	PM (lb/day)	PM <sub>10</sub> (lb/day)
<b>16163A AST GDF<sup>3</sup> (1984)</b>						
<b>MOD-26-00003/GNR-0017433A Portable prime Isuzu diesel engine- pump set #1 - 61.7 HP<sup>4,5</sup> (2026)</b>	<b>8.68</b>	<b>0.05</b>	<b>0.02</b>	<b>0.01</b>	<b>0.05</b>	<b>0.05</b>
GNR-0017895 Advanced water purification facility <sup>6</sup>						
GNR-0017896 Advanced water demonstration purification facility <sup>6</sup>						
GNR-0018026 Fume hood (1990)		1.10				
<b>GNR-0018242 Emer. Tier 4F diesel eng-gen - 65 HP<sup>2</sup> (2016)</b>						
GNR-0018289/MOD-21-00054 Wastewater treat. & reclamation (1982)		78.19				
GNR-0018290 Port Tier 4F diesel eng- pump set - 61 HP <sup>4,5</sup> (2019)	4.29	0.02	0.11	0.01	0.02	0.02
<b>GNR-0018362 Digester gas gen. set #1<sup>4</sup> (1984)</b>	<b>57.60</b>	33.60	168.00	14.64	1.41	1.41
<b>GNR-0018363 Digester gas gen. set #2<sup>4</sup> (1992)</b>	<b>57.60</b>	33.60	168.00	14.64	1.41	1.41
<b>GNR-0018364 Digester gas gen. set #3<sup>4</sup> (1992)</b>	<b>57.60</b>	33.60	168.00	14.64	1.41	1.41
<b>GNR-0018365 Dig. gas flare<sup>4</sup> (1987)</b>	<b>28.50</b>	38.92	155.68	34.31	7.94	7.94
<b>GNR-0018366 Boiler nat/digester gas 8.369MMBtu/hr<sup>4,9</sup> (1982)</b>	<b>19.70</b>	1.10	16.50	0.10	1.50	1.50
GNR-0018367A Port. Tier 3 diesel eng-sludge lagoon barge low-use - 202 HP <sup>4,5</sup> (1995)	27.87	0.85	14.31	0.07	1.17	1.12
<b>GNR-0018368 Port emer. Tier 1 diesel eng-gen - 1,114 HP (To be replaced by APP-26-00013 &amp; APP-26-00014)</b>						
PTO-23-00016 Port prime Tier 4F diesel eng-sewer pump - 74 HP (2023)	4.99	0.26	0.73	0.01	0.01	0.01
APP-25-00014 Co-digestion food waste processing-carbon filters (2025)		8.38				
APP-25-00095 Emer. nat. gas gen. rated - 132 HP <sup>2</sup> (2025)						
APP-25-00105 Linear generator - 250 KW (2025)	0.48	0.66	1.39	0.03	0.13	0.13
<b>APP-26-00011 Portable prime Isuzu diesel engine-pump set #2 - 61.7 HP<sup>4,5</sup> (2026)</b>	<b>8.68</b>	<b>0.05</b>	<b>0.02</b>	<b>0.01</b>	<b>0.05</b>	<b>0.05</b>
<b>APP-26-00013 Prime diesel engine- gen set #1 - 825 HP<sup>4,5</sup> (2026)</b>	<b>11.69</b>	<b>0.31</b>	<b>3.27</b>	<b>0.16</b>	<b>0.65</b>	<b>0.62</b>

Permit/Application no.:	NO <sub>x</sub> <sup>1</sup> (lb/day)	VOC (lb/day)	CO (lb/day)	SO <sub>x</sub> (lb/day)	PM (lb/day)	PM <sub>10</sub> (lb/day)
APP-26-00014 Prime diesel engine-gen set #2 – 825 HP <sup>4,5</sup> (2026)	11.69	0.31	3.27	0.16	0.65	0.62
Total	299.37	231.00	699.30	78.79	16.40	16.29
Rule 207: Table 4.2.1 Offset Threshold:	137	137	550	150	150	82

<sup>1</sup> The facility is permitted with a daily NO<sub>x</sub> emission limit of 221 pounds per day (40.33 tons per year) from sources subject to offset requirements. The facility has been subject to Offsets since the initial permitting of the facility. **The sources highlighted in Bold are the sources subject to the facility daily NO<sub>x</sub> limit of 221 lbs/day.** The facility must keep records to demonstrate the daily emissions from all the equipment, except for equipment subject to the offset exemptions of Rule 207, does not exceed 221 pounds per day.

<sup>2</sup> Pursuant to Rule 207, Section 1.3.3, the offset requirements of Sections 4.2 and 5.3 do not apply to emergency internal combustion engine that is either only used for emergency power when normal power line services fail, or are used only for the emergency pumping of water, and are operated less than 60 hours per year for testing and exercise.

<sup>3</sup> Pursuant to Rule 207, Section 1.3.1, gasoline storage and dispensing equipment subject to Rules 418 and Rule 1002 shall be exempt from the requirements of Rule 207. The gas station is subject to Rules 418 and 1002 and is exempt from Rule 207.

<sup>4</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. For nat. gas boilers: PM<sub>10</sub> = 1.0 PM & PM<sub>2.5</sub> = 1.0 PM. For gaseous material combustion (digester gas flare and engines): PM<sub>10</sub> = 1.0 PM & PM<sub>2.5</sub> = 1.0 PM.

<sup>5</sup> SO<sub>x</sub> emissions based upon low-sulfur diesel fuel of 15 ppm, or 2.5E-04 lb SO<sub>x</sub>/gal of diesel, and the fuel consumption rate of each diesel engine. PTO 7945B max fuel consumption rate is 19.3 gal/hr. PTO 11806A max fuel consumption rate is 103.6 gal/hr. PTO GNR-0018367 max fuel consumption rate is 12 gal/hr. Sample calculation for PTO GNR-0018367: [(12 gal/hr) (24 hr/day) (2.5E-04 lb SO<sub>x</sub>/gal of diesel) = 0.07 lb SO<sub>x</sub>/day].

<sup>6</sup> The advanced water purification facilities are not a source of criteria pollutants. The facilities are permitted for the use of ozone generators.

Table 16 shows that the facility net emissions increases exceed the Offset thresholds for NO<sub>x</sub>, VOC and CO of Section 4.2, Table 4.2.1. As noted above, the facility is proposing to internally offset the project by not operating one of the three (3) digester gas cogeneration engines when the Yanmar twin-pack diesel engine-generator is in operation.

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 the District issues the federal Operating Permits. Pursuant to the applicability Section 1.2, the provisions of the Rule apply to:

- Any facility that is a major source; or
- Any acid rain source, as defined by Title IV of the Act; or
- Any solid waste incinerator that must comply with Section 129(e) of the Act; or
- Any other stationary source or category of sources deemed to require a Federal Operating Permit (FOP) by the United States EPA.

Section 2.18.1 defines a major source as a stationary source or any group of stationary sources as defined above, that directly emits, or has the potential to emit, 100 tons per year or more of any air pollutant except greenhouse gases. The fugitive emissions of a stationary source shall not be considered in determining whether it is a major stationary source for the purpose of Section 302(j) of the Act unless the source belongs to one of the stationary source categories listed in 40 CFR 70.2 “Definitions – Major Source (2)(i-xxvi).

The facility has been issued a Title V permit, TV-122, at the regional wastewater treatment plant.

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 billable emissions shall be based on the 75% of the potential to emit for equipment listed on the permit unless operation is restricted by permit conditions. Table 17 shows the billable emissions from each of the proposed Volvo Penta TWD1672GE diesel engines with a corresponding fee code of 504.

Table 17. PTE emissions for each Volvo Penta TWD1672GE diesel engine.

Pollutant	Yearly emissions <sup>1</sup> (ton/yr)
NO <sub>x</sub>	2.13
VOC	0.06

Pollutant	Yearly emissions <sup>1</sup> (ton/yr)
CO	0.60
SO <sub>x</sub>	0.03
PM	0.12
PTE Total:	2.94
75% PTE:	2.21

<sup>1</sup> Annual emissions based upon proposed operating schedule 8,760 hours per year.

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.

Pursuant to Section 3.1, a person shall not discharge from any source whatsoever particulate matter in excess of 0.15 grains/ft<sup>3</sup>.

Compliance is assured by the exhaust grain loading calculation from the Santa Barbara County APCD Piston IC Engine Technical Reference Document, equation A3, as follows:

$$E_C = E_{FPM} * CF1 * 1/F_D * 1/BSFC * 1/EAC * 1/CF2 * 10^6$$

$$E_C = (0.0149 \text{ g/hp-hr}) * (7,000 \text{ gr/lb}) * (\text{MMBtu}/9,220 \text{ ft}^3) * (\text{hp-hr}/7,100 \text{ Btu}) * (\text{lb}/454 \text{ g}) * (10^6 \text{ Btu/MMBtu}) = 0.0033 \text{ gr/ft}^3$$

where:

EC = exhaust grain loading (gr/dscf).

E<sub>FPM</sub> = Tier 4 Final particulate matter emission factor (0.0149 g/hp-hr).

F<sub>D</sub> = F-factor exhaust volume at 0% O<sub>2</sub> and TSTD (9, 220 ft<sup>3</sup>/MMBTU).

BSFC = engine brake-specific fuel consumption - HHV based (7,100 Btu/bhp-hr).

EAC = excess air correction (assume 0% O<sub>2</sub>).

CF1 = grains to pound conversion factor (7000 gr/lb).

CF2 = grams to pound conversion factor (454 g/lb).

2. The formula is referenced from the "Santa Barbara County APCD Piston IC Engine Technical Reference Document."

<https://www.ourair.org/wp-content/uploads/sbcapcdicerefdoc.pdf>

#### 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 the BACT requirements of Section 4.1 or 5.2 of MBARD Rule 207 shall not be subject to Section 3.1 of this Rule for the same pollutant. As noted above, the project is subject and will meet the Rule 207 BACT requirements.

#### 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.

Pursuant to Section 1.3.1.3, any stationary source with a valid federal operating permit is exempt from the requirements of this Rule. As stated above, the facility is operating under a Title V permit and is exempt from the requirements of this Rule.

#### 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.

MBARD Rule 1000 Part 3 requires new or modified sources of toxic air contaminants (TAC) and carcinogenic toxic air contaminants (CATC) to meet the following:

- 3.1.1 The acute hazard index for any target organ or organ system due to TAC emissions from the new or modified permit unit shall not exceed 1.0 at any receptor location;
- 3.1.2 The chronic hazard index for any target organ or organ system due to TAC emissions from the new or modified permit unit shall not exceed 1.0 at any receptor location;
- 3.1.3 The cancer risk due to TAC emissions from the new or modified permit unit shall not exceed 10 in one million at any receptor location.

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 ATCM. Since the proposed diesel-powered engine generator set is subject to the ATCM for Stationary Compression Ignition Engines, the project is exempt from Rule 1000.

AB2588 Air Toxic “Hot Spots” Information & Assessment Act

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. The prioritization score was conducted using SJVAPCD’s Prioritization Calculator (12/1/22), which was updated to include the latest risk assessment health values from the Consolidated Table of Office of Environmental Health Hazard Assessment (OEHHA) and CARB Approved Risk Assessment Health version [25268](#) (9/25/2025).

Table 18 shows the prioritization scores, which include acute, chronic, and cancer scores at various receptor distances since the proposed unit is a portable engine-generator that can be used at multiple locations.

Table 18. Prioritization scores for each Volvo Penta Tier 4 Final diesel engine.

Receptor proximity & proximity factor	Cancer Score	Chronic Score	Acute Score
0 < R < 100 (1.000)	5.48E+02	8.13E-01	-
100 ≤ R < 250 (0.250)	1.37E+02	2.03E-01	-
250 ≤ R < 500 (0.040)	2.19E+01	3.25E-02	-
500 ≤ R < 1000 (0.011)	6.03E+00	8.94E-03	-
1000 ≤ R < 1500 (0.003)	1.65E+00	2.44E-03	-
1500 ≤ R < 2000 (0.002)	1.10E+00	1.63E-03	-

MIW submitted a revised permit application that included a health risk assessment (HRA) for the Tier 4 Final Volvo Penta diesel engines at each of the possible locations where the proposed portable unit will operate in prime mode with the proposed annual number of hours. The HRA used the California Air Pollution Control Officers Association (CAPCOA) Diesel Internal Combustion Engine (DICE) Risk Tool to determine the residential and worker cancer risk for each location listed in Table 1. A copy of the HRA is saved on the permit file.

Title 17 CCR Section §93116: ATCM for Diesel Particulate Matter From Portable Engines Rated at 50 Horsepower and Greater

The portable diesel engine is subject to the requirements of this rule.

*Diesel Fuel Requirement of Section §93116.3(a)*

Pursuant to Section §93116.3(a), diesel-fueled portable engines must only use CARB diesel fuel, alternative diesel fuel that has been verified by CARB, or CARB diesel fuel utilizing fuel additives that have been verified by CARB.

*Diesel PM Standards of Section §93116.3(b)*

Pursuant to Section §93116.3(b)(1), starting January 1, 2010, all portable diesel-fueled engines must be certified to meet a federal or California standard for newly manufactured engines pursuant to 40 CFR Part 89, Part 86, or the equivalent categories in Title 13 of CCR. The portable diesel engine is a certified Tier 4 Final unit.

Section §93116.3(b)(3) sets date lines for when portable engines can be designated low-use or emergency-use for Tier 1 and Tier 2 engines only and does not affect this Tier 4 final portable engine.

*Fleet Requirements of Section §93116.3(c)*

Section §93116.3(c)(1) sets date lines for removing Tier 1, Tier 2 and Tier 3 diesel engines from operation. Tier 3 engines build on or after 1/1/2009 for large fleets need to be removed from operation by 1/1/2027. For the purposes of this ATCM, a large fleet has a total maximum horsepower over 750 bhp for all portable engines under common ownership and control of a fleet on June 30, 2019, per [Section §93116\(a\)\(17\)\(A\)](#). MIW is considered a large fleet since it operated a portable engine rated at 1,114 HP under PTO 10986 as of June 30, 2019. The proposed Model Year 2023 Tier 4 Final engine does not need to be removed from service.

Section §93116.3(c)(2) sets the fleet PM standards for facilities that elected to meet the fleet standards of this ATCM. MIW did not elect to meet the fleet PM standards of this Section.

*Prohibition of Sale of Section §93116.3(e)*

This section does not have prohibition of sale requirements for Tier 4 Final engines.

*Disclosure of Applicability of Section §93116.3(f)*

Pursuant to Section 93116.3(f), the facility must provide the following disclosure in writing when selling this engine as part of the sales transaction: “When operated in California, any portable diesel engine may be subject to the California Air Resources Board Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated At 50 Horsepower And Greater. It therefore could be subject to retrofit or accelerated turnover requirements to reduce emissions of air pollutants. For more information, please visit the California Air Resources Board website at <http://www.arb.ca.gov/portable/portable.htm>.”

*Fleet Recordkeeping and Reporting Requirements of Section §93116.4*

Pursuant to Section 93116.4(b)(2), the engine is also required to install and maintain a non-resettable hour-meter.

The permit will be conditioned to meet the requirements of this ATCM.

It is noted that this ATCM for portable diesel engines does not list requirements for diesel engines at or near schools like those included in the ATCM for stationary diesel engines.

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.

MBARD 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, MBARD will do the Public Notice.

As noted above in Table 1 and Table 2, only the Monterey PS #7 location is located within 1,000 feet of a school site, kindergarten through grade 12.

*Monterey PS#7 HRA analysis*

The HRA used the California Air Pollution Control Officers Association (CAPCOA) Diesel Internal Combustion Engine (DICE) Risk Tool to determine the number of hours that would result in a residential cancer risk of less than 1 in a million.

The stack parameters (stack height, stack diameter, exhaust flow rate, & exhaust temperature) used in the DICE Risk Tool are shown in Table 4. In addition, the following parameters was selected/used in the DICE Risk Tool:

- Weather data: Monterey Airport Station KMRY (2015-2016, 2018-2019, 2021), processed with AERMET (version 19191). Data can be found on following webpage: <https://ww2.arb.ca.gov/resources/documents/harp-aermod-meteorological-files>.
- Engine horsepower: 825 hp
- Diesel PM emission factor: 0.0149 g/hp-hr
- Hours per year: 400 hours.
- Base elevation: 50.3 meters (Monterey Air Port).
- Dispersion Coefficients: Rural.
- Building downwash: No.
- Engine load factor: 100%.
- Resident distance: 150 meters for PS #7
- Worker distance: 47 meters for PS #7
- Receptor Grid: Default Grid Spacing.
- Risk Setting: District Defaults.

Table 19 show the DICE HRA results for nearest residential receptor at a distance of 150 meters from Monterey PS #7.

Table 19. DICE HRA results - resident.

Location	Hours per year	Cancer risk (in a million)	Chronic Hazard Index	Acute
Monterey PS #7	400	0.9	2.01E-04	-

Table 20 show the DICE HRA results for nearest worker receptor at a distance of 40 meters from Monterey PS #7.

Table 20. DICE HRA results - worker.

Location	Hours per year	Cancer risk (in a million)	Chronic Hazard Index	Acute
Monterey PS #7	400	0.0398	1.02E-04	-

As shown in Table 19 and Table 20, the cancer risk is less than 1 in a million and the chronic hazard index is less than 1.0. Thus, MBARD will add a condition that will limit the operation of the Volvo Penta diesel engine to 400 hours or less at the Monterey PS #7 location.

**VI. CONCLUSIONS:**

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

## **VII. RECOMMENDATIONS:**

Issue the Authorities to Construct with the following additional conditions:

1. No later than twenty-four (24) hours prior to start-up of the equipment, Monterey One Water 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. The annual hours of operation and diesel fuel usage shall be reported to MBARD, upon request. [Basis: MBARD Rule 207]
3. The engine shall be in compliance with the emission standards, as specified in the California Air Resources Board (CARB) Airborne Toxic Control Measure (ATCM) For Diesel Particulate Matter From Portable Engines Rated At 50 Horsepower And Greater. [Basis: 17 CCR Section §93116]
4. The total oxides of nitrogen emissions, as NO<sub>2</sub>, from the equipment below operating at the Monterey One Water Regional Wastewater Treatment Plant shall not exceed 221 pounds per day; excluding emissions from units exempted from the Offset requirements of Rule 207. The NO<sub>x</sub> emissions for the Volvo Penta TWD 1672 GE Tier 4 Final diesel engine shall be based on the engine's NO<sub>x</sub> emissions factor of 0.268 grams per brake horse power-hour or 0.49 pounds per hour. [Basis: SIP Rule 207]
  - a) The Yanmar Portable Prime twin-pack diesel engine-generator set powered by the following two Tier 4 Final diesel engines:
    - i. Volvo Penta Tier 4 Final diesel engine under Authority to Construct, APP-26-00013.
    - ii. Volvo Penta Tier 4 Final diesel engine under Authority to Construct, APP-26-00014.
  - b) The natural gas/digester gas fired cogeneration engine sets #1, #2, & #3, under latest permit to operate GNR-0018362, GNR-0018363, and GNR-0018364, respectively.
  - c) Digester waste gas candle stick flares under latest permit to operate GNR-0018365.
  - d) The natural gas/digester gas fired boiler under latest permit to operate GNR-0018366.
  - e) Portable sludge lagoon barge engine under latest permit to operate GNR-0018367.
  - f) Portable prime sewer pump under latest permit to operate GNR-0017433.
  - g) Portable prime water pump under latest permit to operate GNR-0018290.
  - h) Portable prime sewer pump under latest permit to operate PTO-23-00016.
  - i) Portable prime pump under latest Authority to Construct APP-26-00011.
5. The total carbon monoxide (CO) emissions from the equipment below operating at the Monterey One Water Regional Wastewater Treatment Plant shall not exceed 676.18 pounds per day; excluding emissions from units exempted from the Offset requirements of Rule 207. The CO emissions for the Volvo Penta TWD 1672 GE Tier 4 Final diesel engine shall be based on the engine's CO emissions factor of 0.075 grams per brake horse power-hour or 0.14 pounds per hour. [Basis: SIP Rule 207 Offsets]
  - a) The Yanmar Portable Prime twin-pack diesel engine-generator set powered by the following two Tier 4 Final diesel engines:
    - i. Volvo Penta Tier 4 Final diesel engine under Authority to Construct, APP-26-00013.
    - ii. Volvo Penta Tier 4 Final diesel engine under Authority to Construct APP-26-00014.
  - b) The natural gas/digester gas fired cogeneration engine sets #1, #2, & #3, under latest permit

- to operate GNR-0018362, GNR-0018363, and GNR-0018364, respectively.
- c) Digester waste gas candle stick flares under latest permit to operate GNR-0018365.
  - d) The natural gas/digester gas fired boiler under latest permit to operate GNR-0018366.
  - e) Portable sludge lagoon barge engine under latest permit to operate GNR-0018367.
  - f) Portable prime pump under this permit, latest permit to operate GNR-0017433.
  - g) Portable prime water pump under latest permit to operate GNR-0018290.
  - h) Portable prime sewer pump under latest permit to operate PTO-23-00016.
  - i) Portable prime pump under latest Authority to Construct APP-26-00011.
6. The total volatile organic compounds (VOC) emissions from the equipment below operating at the Monterey One Water Regional Wastewater Treatment Plant shall not exceed 220.98 pounds per day; excluding emissions from units exempted from the Offset requirements of Rule 207. The VOC emissions for the Volvo Penta TWD 1672 GE Tier 4 Final diesel engine shall be based on the engine's VOC emissions factor of 0.007 grams per brake horse power-hour or 0.01 pounds per hour. [Basis: SIP Rule 207 Offsets]
- a) The Yanmar Portable Prime twin-pack diesel engine-generator set powered by the following two Tier 4 Final diesel engines:
    - i. Volvo Penta Tier 4 Final diesel engine under Authority to Construct, APP-26-00013.
    - ii. Volvo Penta Tier 4 Final diesel engine under Authority to Construct APP-26-00014.
  - b) The natural gas/digester gas fired cogeneration engine sets #1, #2, & #3, under latest permit to operate GNR-0018362, GNR-0018363, and GNR-0018364, respectively.
  - c) Digester waste gas candle stick flares under latest permit to operate GNR-0018365.
  - d) The natural gas/digester gas fired boiler under latest permit to operate GNR-0018366.
  - e) Portable sludge lagoon barge engine under latest permit to operate GNR-0018367.
  - f) Portable prime pump under this permit, latest permit to operate GNR-0017433.
  - g) Portable prime water pump under latest permit to operate GNR-0018290.
  - h) Portable prime sewer pump under latest permit to operate PTO-23-00016.
  - i) Portable prime pump under latest Authority to Construct APP-26-00011.
7. Monterey One Water shall keep daily records and prepare a monthly summary to record the following process parameters. [Basis: MBARD Rule 207]
- a) Engine make, model, and serial number;
  - b) Date of operation;
  - c) Operating location;
  - d) Start and finish engine hour meter readings;
  - e) Hours of operation (hours/day);
  - f) Total combined monthly engine hours of operation (hours/month); and,
  - g) Total combined monthly engine diesel fuel usage (gallons/month). If no fuel records are available, fuel usage can be based on each engine's fuel usage rate at 100% load as listed in the engine specifications.

If the operating location is within 1,000 feet from the outer boundary of a school site, kindergarten through grade 12, the log shall also include the following information:

- h) Name of school; and,
- i) School address.

Records shall be retained for at least five years and made available to MBARD staff upon request. The requested records must be provided to MBARD within ten business days of the request.

8. 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 207]
9. The engine and control devices must be installed and configured according to the manufacturer's emission-related written instructions. [Basis: MBARD Rule 207]
10. The engine and control devices shall be operated and maintained in accordance with the manufacturer's emission-related written instructions. Maintenance records shall be retained with other required engine operational data as specified in Condition 7. [Basis: MBARD Rule 207]
11. Operation of the engine and emission control devices 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 MBARD approval. [Basis: MBARD Rule 207]
12. The engine shall not reside or operate at a single site within a facility greater than 12 consecutive months, excluding storage periods. [Basis: Title 17 CCR 93116.2]
13. Upon sale of this engine, Monterey One Water must provide the following disclosure in writing to the buyer as part of the sales transaction: "When operated in California, any portable diesel engine may be subject to the California Air Resources Board Airborne Toxic Control Measure for Diesel Particulate Matter From Portable Engines Rated At 50 Horsepower And Greater. Therefore, it could be subject to retrofit or accelerated turnover requirements to reduce emissions of air pollutants. For more information, please visit the California Air Resources Board website at <http://www.arb.ca.gov/portable/portable.htm>." [Basis: MBARD-only, Title 17 CCR 93116.3(f), Non-Federally Enforceable]
14. The diesel fuel consumed shall meet California Air Resources Board (CARB) specifications, or the alternative diesel fuel specifications as defined in the Portable ATCM for engines rated at 50 horsepower and greater. [Basis: Title 17 CCR 93116.3(a)]
15. If the cumulative annual operating hours exceed 400 hours per year at the Monterey Pump Station PS #7 located at Reeside & Cannery Row in Monterey, which is located within 1,000 feet from the outer boundary of the Big Sur Charter School, Monterey One Water must notify MBARD and comply with Health and Safety Code Sections 42301.6 through 42301.9, which include public notice requirements. [Basis: HSC § 42301.6-42301.9]
16. 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. [Basis: MBARD Rule 400]
17. No emissions shall constitute a public nuisance. [Basis: MBARD Rule 402]