DRAFT ENGINEERING EVALUATION

Facility ID No. 24795
601 & 651 Gateway Center LP
651 Gateway Boulevard, South San Francisco, CA 94080
Application No. 31738

Background

601 & 651 Gateway Center LP is applying for an Authority to Construct/Permit to Operate for the following equipment:

S-5 Emergency Standby Diesel Generator Set
Make: Cummins, Model: QSK60-G19 NR2, Model Year: 2022
3640 bhp, 23.80 MMBtu/hr
Permit Condition Nos. 22850, 27752, and 27697

Abated by

A-1 Selective Catalytic Reduction
Cummins CA452 After Treatment

A-3 Diesel Particulate Filter
Cummins CA452 After Treatment

S-6 Emergency Standby Diesel Generator Set
Make: Cummins, Model: QSK60-G19 NR2, Model Year: 2022
3640 bhp, 23.80 MMBtu/hr
Permit Condition Nos. 22850, 27752, and 27697

Abated by

A-2 Selective Catalytic Reduction
Cummins CA452 After Treatment

A-4 Diesel Particulate Filter
Cummins CA452 After Treatment

The criteria pollutants are nitrogen oxides (NOx), carbon monoxide (CO), precursor organic compounds (POC) from unburned diesel fuel, sulfur dioxide (SO_2) and particulate matter (PM_{10}). All of these pollutants are briefly discussed on the District's web site at www.baaqmd.gov.

S-5 and S-6 meets the Environmental Protection Agency and California Air Resources Board (EPA/CARB) Tier 2 Off-road standard. The engine will burn commercially available California low sulfur diesel fuel. The sulfur content of the diesel fuel will not exceed 0.0015% by weight.

This evaluation report will discuss compliance of the proposed project with all applicable rules and regulations.

In addition to reviewing the above equipment, the permit conditions were reviewed for the following source:

S-2 Emergency Standby LOE Diesel Fire Pump
Make: Cummins, Model: V504FG, Model Year: 1986
177 BHP

The application (AN 4625) for S-2 was approved on April 29, 2002. At this time, S-2 received the permit condition #19099. The permit condition was then updated to condition #22850 which limits the use for reliability-related activities to 50 hours per year. The diesel PM emission factor for S-2 is 1.00 g/bhp-hr and therefore the permit condition #22850 was determined to be out of date and no longer reflects current requirements (ATCM 93115.3(n), Attachment 1).

Emissions

Table 1. Annual and Daily Emissions from EPA/CARB Certified Data from S-5

Pollutant	Unabated Emission Factor (g/bhp-hr)	Abated Emission Factor (g/bhp-hr)	Max Daily Emissions (lb/day)	Annual Emissions (lb/yr)	Annual Emissions (tons/yr)
NOx	4.37	0.50	96.21	200.62	0.100
POC	0.20	0.14	26.94	56.17	0.028
CO	0.75	0.75	143.55	299.32	0.150
$PM_{10}/PM_{2.5}$[1]	0.10	0.02	3.01	6.29	0.003
SO_2	N/A[2]	N/A[2]	1.06	2.20	0.001

Table 2 Annual and Daily Emissions from EPA/CARB Certified Data from S-6

Pollutant	Unabated Emission Factor (g/bhp-hr)	Abated Emission Factor (g/bhp-hr)	Max Daily Emissions (lb/day)	Annual Emissions (lb/yr)	Annual Emissions (tons/yr)
NOx	4.37	0.50	96.21	200.62	0.100
POC	0.20	0.14	26.94	56.17	0.028
CO	0.75	0.75	143.55	299.32	0.150
$PM_{10}/PM_{2.5}$[1]	0.10	0.02	3.01	6.29	0.003
SO_2	N/A[2]	N/A[2]	1.06	2.20	0.001

Basis:

- Annual emissions: Reliability-related activity 50 hours for S-5 and S-6
- Max daily emissions: 24-hour operation
- Emissions from EPA Engine Family NCEXL060.AAD for S-5 and S-6
- [1] Conservative Assumption: All PM emissions are PM2.5
- [2] SO_2 emission factor from AP-42 Table 3.4-1, SO_2 (15 ppm) = 0.00809*0.0015 lb SO_2/bhp-hr

Ammonia Slip

The proposed engine will have an SCR installed (A-1 and A-2), which will control emissions with ammonia via catalytic reactions. However, there will be a small amount of ammonia that will not react and will slip through the SCR. Below are estimated Ammonia emissions for this project.

Table 3. Emissions from Ammonia Slip

Source#	Ammonia Slip ppm @ 15% O2	Ammonia Slip ppm @ 0% O2	Actual Temp. (°F)	Actual Exhaust Flowrate (acfm)	Dry Standard Exhaust Flowrate (dscfm)	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lb/year)
S-5	10	35.42	1022	18269	2980.28	5.6E-01	2.8E+01
S-6	10	35.42	1022	18269	2980.28	5.6E-01	2.8E+01

Basis:

- Annual emissions: Reliability-related activity 50 hours.
- It is assumed that the exhaust water content is 12.5% by weight.
- It is assumed that the exhaust is at standard pressure.
- Volumetric concentrations were corrected to 0% O2 from 15% O2.
- The exhaust flowrates were corrected to 0% O2 from 10% O2.

Plant Cumulative Increase

Table 3 summarizes the cumulative increase in criteria pollutant emissions that will result from this application.

Table 4. Plant Cumulative Emissions Increase, Post 4/5/91

Pollutant	Existing Emissions Post 4/5/91 (tons/yr)	Application Emissions (tons/yr)	Cumulative Emissions (tons/yr)
NOx	0.000	0.201	0.201
POC	0.000	0.056	0.056
CO	0.000	0.301	0.301
$PM_{10}/PM_{2.5}$	0.000	0.006	0.006
SO_2	0.000	0.002	0.002

Health Risk Assessment (HRA)

HRA was required. The diesel particulate emissions from the project are greater than the toxic trigger level of 0.26 lb/year. All PM_{10} emissions are considered diesel particulate emissions. The PM_{10} emissions from this application are summarized in Table 1. There were no other related projects permitted in the last three years. Since the diesel particulate emissions from the project are greater than the toxic trigger level of 0.26 lb/year, an HRA is required. This application did not qualify for HRA streamling because the application PM emissions and recpetor distances are above the streamlining threshold.

Ammonia emissions are not expected to exceed Regulation 2-5 acute and chronic toxic trigger level of 7.1 lb/hr and 7,700 lb/year. However, Ammonia emissions were included in the HRA.

The project is in compliance with project risk requirements as recommended, limiting reliability-related activity hours by permit condition. See HRA report.

HRA Results

This analysis estimates the incremental health risk resulting from toxic air contaminant (TAC) emissions from non-emergency operation of a standby generator diesel engine at this facility. Results from this HRA indicate that the maximum project cancer risk is estimated at 1.3 in a million, and the maximum project chronic hazard index is estimated at 0.0010. The maximum acute hazard index is 0.0036. See HRA Report for more details.

Table 5. Risk Screening Results

Maximally Exposed Receptor	Maximum Cancer Risk	Maximum Chronic Hazard Index
Resident	0.061 in a million	0.000017
Worker	1.3 in a million	0.0010

TBACT

In accordance with the District's Regulation 2-5-301, this source requires TBACT because the estimated source cancer risk is greater than 1.0 in a million. BACT and TBACT determinations for compression ignition engines with a rated capacity ≥ 1000 bhp are described in BAAQMD BACT/TBACT Workbook for IC Engines – Compression Ignition: Stationary Emergency, non-Agricultural, non-direct drive fire pump, Document #96.1.5, Revision 0. dated 12/22/2020 (see Attachment 2). The proposed engine complies with TBACT by having a certified PM emission rate that is less than or equal to 0.15 g/bhp-hour. The certified PM emission rate for these engines is 0.02 g/bhp-hour.

Project Risk Limits

Since the proposed engines, operating at 50 hours/year for reliability related testing, complies with TBACT, and the estimated project cancer risk does not exceed 6.0 in a million and the chronic hazard index does not exceed 1.0 this project complies with the District's Regulation 2-5-302 project risk requirements for projects located in an Overburdened Community, as defined in Regulation 2-1-243. No additional operating hour restrictions were necessary for this project.

Best Available Control Technology (BACT)

In accordance with Regulation 2-2-301, BACT is triggered for any new or modified source with the potential to emit 10 pounds or more per highest day of POC, NPOC, NOx, CO, SO_2, or PM_{10}.

BACT for this source is presented in the current BAAQMD BACT/TBACT Workbook for IC Engine – Compression Ignition: Stationary Emergency, non-Agricultural, non-direct

drive fire pump, Document #96.1.3, Revision 8. dated 12/22/2020. For NOx, CO, POC and PM_{10}, BACT(2) is the CARB ATCM standard for the respective pollutant at the applicable horsepower rating. For SO_2, BACT(2) is using fuel with sulfur content not to exceed 0.0015%, or 15 ppm. The more restrictive BACT(1) standards are not applicable to this engine because it will be limited to operation as an emergency standby engine.

The CO emission factor is the EPA certified values for the engine family. The NOx and POC emission factors are uncertified values after installation of the SCR. Therefore, S-5 and S-6 will need to verify compliance with the NOx BACT (2) standard through the performance of a source test. S-5 and S-6 satisfies the current BACT(2) standards for the following pollutants which exceed 10 lb/day in Tables 1 and 2:

Pollutant	**Emission Factor**	**BACT(2) Standard**
NOx	0.50 g/bhp-hr	0.50 g/bhp-hr
CO	0.75 g/bhp-hr	2.60 g/bhp-hr
POC	0.14 g/bhp-hr	0.14 g/bhp-hr

Offsets

Offset must be provided for any new or modified source at a facility that will have the potential to emit more than 10 tons per year of NOx or POC, as specified in Regulation 2-2-302; 100 tons per year or more of PM2.5, PM10 or sulfur dioxide, as specified in Regulation 2-2- 303.

Table 6. Potential to Emit for FID 24795

Pollutant	**Existing Annual Emissions* (TPY)**	**Application Annual Emissions* (TPY)**	**Facility Annual Emissions* (TPY)**	**Offset Requirement (TPY)**	**Offset Required**
NOx	1.356	0.602	1.957	>10	N
POC	0.058	0.169	0.227	>10	N
CO	0.286	0.903	1.189	-	N
$PM_{10}/PM_{2.5}$[1]	0.055	0.019	0.074	≥100	N
SO_2	0.041	0.007	0.047	≥100	N

**Annual emissions:*
Reliability-related activity of 50 hours and emergency operation of 100 hours for S-5 and S-6.
Reliability-related activity of 20 hours and emergency operation of 100 hours for S-1.
Reliability-related activity of 34 hours and emergency operation of 100 hours for S-2.
Throughput for annual usage for the registered boilers S-3 and S-4.

Since the facility's potential to emit is below the offsets trigger levels specified in Regulation 2-2, offsets are not required.

Statement of Compliance

The owner/operator is expected to comply with all applicable requirements. Key requirements are listed below:

Airborne Toxic Control Measure for Stationary Compression Ignition Engines
ATCM, 5/19/2011, section 93115, title 17, CA Code of Regulations

District Rules
Regulation 6-1-303 (*Ringelmann No. 2 Limitation*)
Regulation 9-1-301 (*Limitations on Ground Level Concentrations of SO_2*)
Regulation 9-8 (*NOx and CO from Stationary Internal Combustion Engines*)
Section 9-8-110.5 – Limited exemption for emergency standby engines
Section 9-8-330 – Hours of operation for emergency standby engines
Section 9-8-502 – Recordkeeping

California Environmental Quality Act (CEQA)
This project is ministerial under the District Regulation 2-1-311 (Permit Handbook Chapter 2.3) and is therefore not subject to CEQA review.

New Source Performance Standards (NSPS)
40 CFR 60, Subpart IIII (*Stationary Compression Ignition Internal Combustion Engines*)

National Emissions Standards for Hazardous Air Pollutants (NESHAP)
40 CFR 63, Subpart ZZZZ (*Stationary Reciprocating Internal Combustion Engines (RICE)*)

Prevention of Significant Deterioration (PSD)
This application is not part of a PSD project as defined in Regulation 2-2.

Public Notification (Regulation 2-1-412)
This project is over 1,000 feet from the nearest K-12 school, but is located within an overburdened community and is therefore subject to the public notification requirements.

A public notice will be sent to all residential and business addresses within 1,000 feet of the facility. There will be a 30-day public comment period.

Permit Conditions

Permit Condition #22850 for S-5 and S-6

1. The owner/operator shall not exceed 50 hours per year per engine for reliability-related testing. [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

2. The owner/operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, State or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating while mitigating emergency conditions or while emission testing to show compliance with District, State or Federal emission

limits is not limited. [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained. [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

4. Records: The owner/operator shall maintain the following monthly records in a District- approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.
    a. Hours of operation for reliability-related activities (maintenance and testing).
    b. Hours of operation for emission testing to show compliance with emission limits.
    c. Hours of operation (emergency).
    d. For each emergency, the nature of the emergency condition.
    e. Fuel usage for each engine(s). [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

5. At School and Near-School Operation: If the emergency standby engine is located on school grounds or within 500 feet of any school grounds, the following requirements shall apply: The owner/operator shall not operate each stationary emergency standby diesel-fueled engine for non-emergency use, including maintenance and testing, during the following periods:
    a. Whenever there is a school sponsored activity (if the engine is located on school grounds)
    b. Between 7:30 a.m. and 3:30 p.m. on days when school is in session. "School" or "School Grounds" means any public or private school used for the purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s). "School" or "School Grounds" includes any building or structure, athletic field, or other areas of school property but does not include unimproved school property. [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

Permit Condition # 27697 for S-5 and S-6

1. The owner/operator shall not operate unless nitrogen oxide (NOx) emissions from the emergency diesel engine are abated by a Selective Catalytic Converter at all times. [Basis: BACT]

2. The owner/operator shall not exceed the following emission limitations:
    a. NOx: 0.50 gram/horsepower hour [Basis: BACT]
    b. POC: 0.14 gram/horsepower hour [Basis: BACT]

3. Within 60 days from startup, and within a frequency of no less than once every three (3) years after each subsequent source test thereafter, the owner/operator shall conduct District approved source tests to determine compliance with the limit in Part 2 of this condition. The owner/operator shall submit the source test results to the District's Source Test Section no later than 60 days after the source test. [Basis: Regulation 2-1-403]

4. The owner/operator shall comply with all applicable testing requirements as specified in Volume IV of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. [Basis: Regulation 2-1-403]

5. The owner/operator shall maintain the following records for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on site, either at a central location or at the engine's location, and made immediately available to District staff upon request.
    a. Source Test Notification
    b. Source Test Report [Basis: Regulation 2-1-403]

Permit Condition # 27752 for S-5 and S-6

1. The owner/operator shall abate the particulate emissions from the emergency diesel engine by the Diesel Oxidation Catalyst/Particulate Filter at all times the engine is in operation. [Basis: Toxics, "ATCM for Stationary Compression Ignition Engines" Section 93115.6(a)(3) or 93115.6(b)(3), title 17, CA Code of Regulations]

2. The owner/operator shall comply with requirements for CARB Executive Order DE-16-001-03. [Basis: CARB Executive Order DE-16-001-03, "ATCM for Stationary Compression Ignition Engines" Section 93115.13(f), title 17, CA Code of Regulations, Toxics, Sections 2700 through 2711 of title 13, CA Code of Regulations]

Permit Condition # 22851 for S-2

1. Operating for reliability-related activities is limited to no more than 34 hours per year per engine which is the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25. This

emergency fire pump is subject to the current National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems."
[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations]

2. The owner or operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, state or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating while mitigating emergency conditions or while emission testing to show compliance with District, state or Federal emission limits is not limited.
   [Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(B)(3)]

3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained.
   [Basis: “Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection(e)(4)(G)(1)]

4. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.
   a. Hours of operation for reliability-related activities (maintenance and testing).
   b. Hours of operation for emission testing to show compliance with emission limits.
   c. Hours of operation (emergency).
   d. For each emergency, the nature of the emergency condition.
   e. Fuel usage for each engine(s).
      [Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(4)(I), (or, Regulation 2-6-501)]

5. At School and Near-School Operation: If the emergency standby engine is located on school grounds or within 500 feet of any school grounds, the following requirements shall apply: The owner or operator shall not operate each stationary emergency standby diesel-fueled engine for non-emergency use, including maintenance and testing, during the following periods:
   a. Whenever there is a school sponsored activity (if the engine is located on school grounds)

b. Between 7:30 a.m. and 3:30 p.m. on days when school is in session. "School" or "School Grounds" means any public or private school used for the purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s). "School" or "School Grounds" includes any building or structure, playground, athletic field, or other areas of school property but does not include unimproved school property.
[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(A)(1)] or (e)(2)(B)(2)]

End of Conditions

Recommendation

I recommend the District change the permit condition to permit condition # 22851 for the following source:

S-2 Emergency Standby LOE Diesel Fire Pump
Make: Cummins, Model: V504FG, Model Year: 1986
177 BHP

The District has reviewed the material contained in the permit application for the proposed project and has made a preliminary determination that the project is expected to comply with all applicable requirements of District, state, and federal air quality-related regulations. The preliminary recommendation is to issue an Authority to Construct/Permit to Operate for the equipment listed below. However, the proposed source will be located within an overburdened community, which triggers the public notification requirements of District Regulation 2-1-412. After the comments are received and reviewed, the District will make a final determination on the permit.

I recommend that the District initiate a public notice and consider any comments received prior to taking any final action on issuance of an Authority to Construct/Permit to Operate for the following source:

S-5 Emergency Standby Diesel Generator Set
Make: Cummins, Model: QSK60-G19 NR2, Model Year: 2022
3640 bhp, 23.80 MMBtu/hr
Permit Condition Nos. 22850, 27752, and 27697

Abated by

A-1 Selective Catalytic Reduction
Cummins CA452 After Treatment

A-3 Diesel Particulate Filter
Cummins CA452 After Treatment

S-6 Emergency Standby Diesel Generator Set
Make: Cummins, Model: QSK60-G19 NR2, Model Year: 2022
3640 bhp, 23.80 MMBtu/hr
Permit Condition Nos. 22850, 27752, and 27697

Abated by

A-2 Selective Catalytic Reduction
Cummins CA452 After Treatment

A-4 Diesel Particulate Filter
Cummins CA452 After Treatment

Prepared By: Liana Solis, Air Quality Technician I

Attachment 1

Table 3: Summary of the Emission Standards and Operating Requirements for In-Use Stationary Emergency Standby Diesel-Fueled CI Engines > 50 BHP (See section 93115.6(b)(3))

Diesel PM				*Other Pollutants*
Diesel PM Standards (g/bhp-hr)	*Maximum Allowable Annual Hours of Operation for Engines Meeting Diesel PM Standards*			*HC, NOx, NMHC+NOx, and CO Standards (g/bhp-hr)*
	Emergency Use	*Non-Emergency Use*		
		Emission Testing to show compliance[1]	*Maintenance & Testing (hours/year)*	
>0.40[2]	Not Limited by ATCM[2]	Not Limited by ATCM[2]	20	Not limited by ATCM[2]
>0.15 and ≤0.40	Not Limited by ATCM[2]	Not Limited by ATCM[2]	21 to 30	For engines with emission control strategies not verified through the verification procedure: Off-Road CI Engine Certification Standards for an off-road engine of the model year and maximum rated power of the engine installed to meet the applicable PM standard, or Tier 1 standards.[3] OR Both (i) and (ii) must be met: (i) No increase in HC or NOx above 10% from baseline levels OR No increase in NMHC+NOx emissions above baseline levels (ii) No increase in CO above 10% from baseline levels
>0.01 and ≤0.15	Not Limited by ATCM[2]	Not Limited by ATCM[2]	31 to 50 (Upon approval by the District)	
≤0.01	Not Limited by ATCM[2]	Not Limited by ATCM[2]	51 to 100 (Upon approval by the District)	

1. Emission testing limited to testing to show compliance with section 93115.6(b)(3).
2. May be subject to emission or operational restrictions as defined in current applicable district rules, regulations, or policies.
3. The option to comply with the Tier 1 standards is available only if no off-road engine certification standards have been established for an off-road engine of the same model year and maximum rated power as the new stationary emergency standby diesel-fueled CI engine.

(n) The requirements of section 93115.6(b)(3) do not apply to in-use emergency fire pump assemblies that are driven directly by stationary diesel-fueled CI engines and only operated the number of hours necessary to comply with the testing requirements of National Fire Protection Association (NFPA) 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," 2002 edition, which is incorporated herein by reference.

Attachment 2

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guideline

Source Category

Source:	**IC Engine-Compression Ignition: Stationary Emergency, non-Agricultural, non-direct drive fire pump**	**Revision:**	**0**
		Document #:	**96.1.5**
Class:	**≥ 1000 BHP Output**	**Date:**	**12/22/2020***

Determination

Pollutant	BACT 1. Technologically Feasible/ Cost Effective 2. Achieved in Practice 3. TBACT	TYPICAL TECHNOLOGY
POC (NMHC)	1. n/s[a] 2. 0.14 g/bhp-hr[b]	1. n/s[a] 2. Any engine certified or verified to achieve the applicable standard
NOx	1. n/s[a] 2. 0.5 g/bhp-hr[b]	1. n/s[a] 2. Any engine certified or verified to achieve the applicable standard
SO_2	1. n/s[a] 2. Fuel sulfur content not to exceed 0.0015% (wt) or 15 ppm (wt)	1. n/s[a] 2. CARB Diesel Fuel (Ultra Low Sulfur Diesel)
CO	1. n/s[a] 2. 2.6 g/bhp-hr[b]	1. n/s[a] 2. Any engine certified or verified to achieve the applicable standard
PM_{10}	1. n/s[a] 2. 0.02 g/bhp-hr[b] 3. 0.02 g/bhp-hr	1. n/s[a] 2. Any engine or technology demonstrated, certified or verified to achieve the applicable standard 3. Any engine or technology demonstrated, certified or verified to achieve the applicable standard
NPOC	1. n/s 2. n/s	1. n/s 2. n/s

* Applies to open permit applications with a complete date on or after 1/1/2020.

References

a. ATCM standard (listed below): Where NMHC + NOx is listed (with no individual standards for NOx or NMHC) as the standard, the portions may be considered 95% NOx and 5% NMHC. For the purposes of determining BACT NMHC = POC. Any engine which has been certified or demonstrated to meet the current year tier standard may be considered compliant with the certified emission standard for that pollutant.

b. Deleted (no longer applies).

c. Cost- effectiveness analysis must be based on lesser of 50 hr/yr or non-emergency operation as limited by District health risk screen analysis.

Table 1: BACT 2 Emission Limits based on CARB ATCM

Emissions Standards for Stationary Emergency Standby Diesel-Fueled CI Engines ≥50 BHP g/Kw-hr (g/bhp-hr)			
Maximum Engine Power	**PM**	**NMHC+NOx**	**CO**
37 ≤ KW < 56 (50 ≤ HP < 75)	0.20 (0.15)	4.7 (3.5)	5.0 (3.7)
56 ≤ KW < 75 (75 ≤ HP < 100)	0.20 (0.15)	4.7 (3.5)	5.0 (3.7)
75 ≤ KW < 130 (100 ≤ HP < 175)	0.20 (0.15)	4.0 (3.0)	5.0 (3.7)
130 ≤ KW < 225 (175 ≤ HP < 300)	0.20 (0.15)	4.0 (3.0)	3.5 (2.6)
225 ≤ KW < 450 (300 ≤ HP < 600)	0.20 (0.15)	4.0 (3.0)	3.5 (2.6)
450 ≤ KW ≤ 560 (600 ≤ HP ≤ 750)	0.20 (0.15)	4.0 (3.0)	3.5 (2.6)
560 < KW < 750 (750 < HP < 1000)	0.20 (0.15)	6.4 (4.8)	3.5 (2.6)