

**Engineering Evaluation
East Bay Municipal Utility District Pump Station M
Application No. 31154
Plant No. 13738**

BACKGROUND

The East Bay Municipal Utility District Pump Station M (EBMUD PSM) has applied for an Authority to Construct and/or Permit to Operate for the following:

- S-2 Emergency Standby Diesel Generator Set (engine)**
Make: Cummins, Model: QSL2-GR9 NR3, Model Year: 2021
375 bhp, 2.49 MMBtu/hr
- S-3 Ozone Generators (2)**
Make: Titus Twister, Model: TT-20 Ozone Generator
20 grams/hour each

The sources above will be located at the pump station at 401 Packet Landing Road, Alameda, CA 94502. The station pumps sewage that is generated locally to the sewage treatment plant in Oakland. The pump normally operates using an electric motor.

EBMUD PSM is planning to install a new emergency standby diesel generator (engine) and two new ozone generators. The ozone generators will be used for odor control at the wet well and will be replacing a sodium hypochlorite-based odor control system. One of the ozone generators is expected to be redundant and will operate if the other ozone generator breaks down or as needed.

Once installed, the new emergency standby diesel generator will replace the existing generator, S-1. The criteria pollutants are nitrogen oxides (NO_x), carbon monoxide (CO), precursor organic compounds (POC) from unburned diesel fuel, sulfur dioxide (SO₂), and particulate matter (PM). All of these pollutants are briefly discussed on the District's web site at www.baaqmd.gov.

The purpose of the emergency standby diesel generator (engine) is to ensure that the pump station can operate during an interruption of electrical power. The old emergency standby diesel generator is similar in size, 365-hp, and is a 1988 model. The new emergency standby diesel generator will have much lower emissions.

S-2 meets the Environmental Protection Agency and California Air Resources Board (EPA/CARB) Tier 3 Off-road standard for engines. 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.

EMISSIONS CALCULATIONS

EBMUD PSM has submitted supporting documents for the proposed engine and ozone generators, which include manufacturer specifications and emissions data. The following tables provide a summary of the engine and ozone generator information, which was provided by the applicant.

Table 1: Daily and Annual Emissions from Manufacturer Guaranteed Data for S-2

Pollutant	Emission Factor ¹ (g/bhp-hr)	Max Daily Emissions (lb/day)	Annual Emissions (lb/yr)	Annual Emissions (tons/yr)
NO _x	2.66	52.7	109.9	0.055
POC	0.14	2.8	5.8	0.003
CO	1.90	37.7	78.5	0.039
PM ₁₀	0.14	2.8	5.8	0.003
PM _{2.5}	0.14	2.8	5.8	0.003
SO ₂	N/A ²	0.1	0.2	0.000

Basis:

- Annual emissions: Reliability-related activity 50 hours for S-2
- Operation during emergencies is not limited.
- Max daily emissions: 24-hour operation
- 1 pound = 454 grams
- ¹Emission factors provided by manufacturers' documentation
- ²SO₂ emission factor from AP-42 Table 3.4-1, SO₂ (15 ppm) = 0.00809*0.0015 lb SO₂/bhp-hr

Table 2: Daily and Annual Emissions from Manufacturer Guaranteed Data for S-3

Pollutant	Hourly Emissions, per unit (lb/hr)	Daily Emissions (lb/day)	Annual Emissions (lb/yr)
Ozone	0.044	1.06	385.4
Total	0.088	2.11	770.9

Emissions for the ozone generators are estimated assuming the worst-case scenario for emissions. The worst-case scenario would include both generators operating at full capacity for 24 hours per day, 365 days per year, without any ozone being consumed in the wastewater. Normally, one ozone generator will operate and most of the ozone will be consumed by the organic matter in the wastewater.

H₂S at vents

The exhaust flowrate during normal operation will be 324 cfm. The H₂S concentration in the exhaust gas will be limited by permit condition to 1.0 ppm. At that concentration, the H₂S mass emissions will be about 0.0016 lb/hr. The annual emission rate will be 14.43 lb H₂S/yr.

TOXIC RISK SCREENING

The emergency engine will be certified to the Tier 3 standards with a PM emission factor of 0.14 g/hp-hr. Using the PM emission factor for the proposed engine, a 50 hour per year limit for reliability-related activities, and assuming PM is in the form of diesel exhaust PM, the following annual emission rate for diesel exhaust PM was calculated.

S-2

$$\frac{0.14 \text{ g PM}}{\text{hp-hr}} \times 375 \text{ hp} \times \frac{\text{lb}}{454 \text{ g}} \times \frac{50 \text{ hr}}{\text{yr}} = 5.8 \text{ lb PM/yr}$$

No related applications have been permitted within the last three years. The emergency engine exceeds the diesel exhaust PM chronic trigger level of Table 2-5-1 "Toxic Air Contaminant Trigger Levels" of Regulation 2-5, which is a level equivalent to 0.26 lb/yr. The overall project emission rate of diesel exhaust PM was calculated to be 5.8 lb/yr. Pursuant to Regulation 2-5-110, a project that exceeds the acute or chronic trigger level of a toxic air contaminant (TAC) is subject to the requirements of this rule. (Note that the diesel PM emission rate for the old engine was about 16.1 lb/yr at an estimated 1 g/bhp-hr and 20 hr/yr of runtime for maintenance and reliability.)

S-2 does not qualify for the District's HRA streamlining policy for stationary diesel-fueled combustion engines used for backup power or fire pumps due to the engine's proximity to a residential receptor.

While the ozone emissions from S-3, the Ozone Generators, do not exceed the ozone toxic trigger level of 0.4 lb/hr, the ozone emissions of 0.088 lb/hr and 770.9 lb/yr were considered in the HRA.

The release of ozone from S-3 is expected to happen according to two scenarios, which were both modeled in the HRA. In the normal operating condition, 162 cfm of diluted ozone will be distributed from each ozone generator by a blower into the wastewater stream, for a total of two blowers and 324 cfm. Any unconsumed ozone would come out of the wastewater and exhaust through the Regular Vent/Odor Control Unit Vent pipe with a flow rate of 324 cfm in this scenario (Scenario 1). If the pathway to the wastewater is blocked, 162 cfm of diluted ozone will exhaust out of each Ozone Emergency Vent (0.044 lb/hr ozone per vent). The Ozone Emergency Vents are each connected to one of the two ozone generators. Between the two Ozone Emergency Vents, 324 cfm of diluted ozone will exhaust into the atmosphere (Scenario 2). HRA forms for both scenarios are in the application folder.

The HRA estimates residential risk assuming exposure to annual average toxic air contaminant concentrations occurring 350 days per year, for 30 years. Risk estimate for offsite workers assumes an exposure that occurs 8 hours per day, 250 days per year, for 25 years.

Results from this HRA indicate that the maximum project cancer risk is estimated at 2.7 in a million, the maximum project chronic hazard index is estimated at 0.035, and the project acute hazard index is estimated at 0.88 and 0.37 for scenarios 1 and 2, respectively. In accordance with the District's Regulations 2, Rule 5, Section 301 and 302, the emergency diesel generator (S-2)

requires TBACT because the estimated source risk is a cancer risk greater than 1.0 in a million. This project complies with Regulation 2-5-302 project risk requirements.

The H2S rates are below the triggers in Regulation 2, Rule 5.

PLANT CUMULATIVE EMISSION

The following table summarizes the cumulative increase in BACT pollutant emissions that will result from this application.

Table 2. Cumulative increase in tons/yr

Pollutant	Existing, tpy	New, tpy	Total, tpy
NO _x	0.000	0.055	0.055
CO	0.000	0.039	0.039
PM ₁₀	0.000	0.003	0.003
PM _{2.5}	0.000	0.003	0.003
SO ₂	0.000	0.000	0.000
POC	0.000	0.003	0.003

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Pursuant to Regulation 2-2-301, BACT is required for a new source with emission increases that equal 10.0 lbs or greater of any BACT pollutant. The engine is expected to exceed the BACT threshold for NO_x and CO.

BACT for this source is presented in the current Bay Area Air Quality Management District (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 NO_x and CO, BACT(2) is the CARB ATCM standard for the respective pollutant at the applicable horsepower rating. The more restrictive BACT(1) standards are not applicable to the engine because it will be limited to operation as an emergency standby engine.

S-2 will satisfy the BACT(2) standard for the following pollutants which exceed 10 lb/day:

Pollutant	Emission Factor	BACT(2) Standard
POC+NO _x ^{1,2}	2.8 g/bhp-hr	3.0 g/bhp-hr
CO	1.9 g/bhp-hr	2.60 g/bhp-hr

¹The actual CARB ATCM standard for NO_x and non-methane hydrocarbons (NMHC) is combined. The NO_x + NMHC standard is equivalent to 3.0 g/hp-hr, which the emergency engine meets.

²NMHC = POC

OFFSETS

Emission offset requirements for POC and NO_x are set out in Regulation 2, Rule 2, Section 302. POC and NO_x offsets are required for new or modified sources at a facility that emits or will be permitted to emit 10 tons per year (tpy) or more of that pollutant. Offsets for POC and NO_x are not required for this application.

The offsets requirements for PM₁₀, PM_{2.5}, and SO_x are specified in Regulation 2, Rule 2, Section 303. Per Section 303, PM₁₀, PM_{2.5}, and SO_x emission offsets are required for any new or modified source that is a major facility for PM₁₀, PM_{2.5}, or SO_x emissions. EBMUD PSM is not a major facility for PM₁₀, PM_{2.5}, and SO_x emissions. Therefore, offsets for PM₁₀, PM_{2.5}, and SO_x are not required for this application.

STATEMENT OF COMPLIANCE

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

CARB Airborne Toxic Control Measure for Stationary Compression Ignition Engines

§93115.2 requires any person who purchases a stationary compression ignition engine to meet the requirements of the ATCM.

As of January 1, 2006, owners and operators of new engines are required to consume CARB diesel fuel in accordance with §93115.5.

Per §93115.6(a)(1), an engine located within 500 feet of school grounds shall not operate for non-emergency use between 7:30 A.M. and 3:30 P.M. on days when school is in session. The source is not located within 500 feet of school grounds.

Pursuant to §93115.6(a)(3), a new engine must meet the following requirements as of January 1, 2005.

- ATCM *“Table 1 Emission Standards for New Stationary Emergency Standby Diesel-Fueled CI Engines”* for same model year and maximum engine power, which is shown below;

Maximum Engine Power	Model Year	PM (g/bhp-hr)	NMHC+NO_x (g/bhp-hr)	CO (g/bhp-hr)
300 ≤ hp < 600 (225 ≤ kW < 450)	2008+	0.15	3.0	2.6

- After December 31, 2008, be certified to the new non-road compression-ignition engine emission standard for all pollutants for 2007 and later model year engines as specified in 40 CFR, Part 60, Subpart III; and,

- Not operate more than 50 hours per year for maintenance and testing purposes, except as provided in §93115.6(a)(3)(A)(2). This regulation does not limit engine operation for emergency use and for emission testing to show compliance with §93115.6(a)(3).

The emergency engine is expected to meet the emission requirements and will be limited, through permit condition, to operate unrestricted only for emergencies and a maximum of 50 hours per year for maintenance and testing purposes. In addition, the permit will include near-school operating provisions that meet the requirements of §93115.6(a)(1).

Pursuant to §93115.10(d) (1) a non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed upon installation. The owner/operator of the emergency engine shall keep monthly records of the following for 36 months, with the prior 24 months readily accessible at the site and the prior 25 to 36 months available to the District within 5 working days from the request. However, Major Facilities are required to maintain records for a minimum of 5 years.

- Emergency use hours of operation;
- Maintenance and testing hours of operation;
- Hours of operation for emission testing to show compliance with §93115.6(a)(3) and §93115.6(b)(3);
- Initial start-up testing hours;
- If applicable, hours of operation to comply with the requirements of NFPA 25;
- Hours of operation for all uses other than those specified in §93115.10(g)(1)(A) through (D);
- If applicable, DRP engine hours of operation; and,
- The fuel used.

**New Source Performance Standards (NSPS)
40 CFR Part 60 Subpart IIII**

According to §60.4200(a)(1)(i), the emergency engine is subject to the requirements of 40 CFR Part 60 Subpart IIII, “Standards of Performance of Stationary Compression Ignition Internal Combustion Engines.”

Pursuant to §60.4205(b), owners or operators of 2007 model year and later stationary emergency diesel engine-generator sets with a displacement of less than 30 liters per cylinder must comply with §60.4202. In accordance with §60.4202(a)(2), the Tier 2 or Tier 3 emission standards for new nonroad compression ignition (CI) engines for the same rated power as described in 40 CFR part 1039, appendix I. Pursuant to 40 CFR part 1039, appendix I, Tier 3 engines with a rated power greater than 130 kW (175 hp) and less than 560 kW (750 hp) must meet the following emission standards.

Table 4. Review of Standards for Engines with Less than 30 L per Cylinder Displacement				
Pollutant	NSPS Emission Standard	NSPS Emission Standard	EPA Certified Emission Rate (unabated)	EPA Certified Emission Rate (unabated)

	(g/kW-hr)	(g/hp-hr)	(g/kW-hr)	(g/hp-hr)
NMHC+NO _x	4.0	3.0	3.8	2.8
CO	3.5	2.6	2.5	1.9
PM	0.20	0.15	0.19	0.14

The aforementioned analysis demonstrates that the emergency engine will meet the emission standards of 40 CFR part 1039, appendix I. In addition, the emergency engine is expected to meet the following opacity standards identified in 40 CFR 1039.105(b).

Table 5. 40 CFR 1039.105(b) Opacity Standards	
Mode	Opacity (%)
Acceleration	20
Lugging	15
Peak (During acceleration or lugging modes)	50

§60.4206 and §60.4211(a) require the owner or operator to maintain and operate the emergency engine according to the manufacturer's written instructions or owner/operator developed procedures approved by the manufacturer for the entire life of the emergency engines. The emergency engine is expected to be maintained and operated in accordance with the requirements of §60.4206 and §60.4211(a).

§60.4207(b) requires diesel fuel purchased (or otherwise obtained) after October 1, 2010 to meet the requirements of 40 CFR 1090.305, which is a maximum sulfur content of 15 parts per million (ppm). The fuel consumed is expected to meet this requirement.

§60.4209(a) requires the installation of a non-resettable hour meter. This will be included as a permit requirement.

The emergency engine is certified to the requirements of 40 CFR part 1039, appendix I and is expected to comply with §60.4211(c).

Per §60.4211(f), the emergency engine will be allowed to operate unrestricted during emergencies. In addition, the emergency engine will be limited to less than 100 hours per calendar year for maintenance and testing. However, the requirements of the CARB ATCM may further limit the maintenance and testing hours.

National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart ZZZZ – Emergency Engine (S-2)

Pursuant to §63.6585, engines located at an area source are subject to the requirements of 40 CFR Part 63 Subpart ZZZZ, "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines."

However, according to §63.6590(a)(1)(iii) & §63.6590(c)(1), diesel engines that commenced construction on June 12, 2006 or later and that operate at a facility that emits or has the potential

to emit any single hazardous air pollutant (HAP) at a rate of less than 10 tons per year or any combination of HAPs at a rate of less than 25 tons per year, comply with the standard by complying with 40 CFR Part 60 Subpart III, “Standards of Performance of Stationary Compression Ignition Internal Combustion Engines.” The emergency engine is expected to meet the requirements of this subpart by meeting the standards of 40 CFR Part 60 Subpart III, “Standards of Performance of Stationary Compression Ignition Internal Combustion Engines.”

District Rules

Regulation 1

The engine is subject to and expected to be in compliance with the requirements of Regulation 1-301 (Public Nuisance), which states that no person shall emit such quantities of air contaminants or other material which cause significant nuisance to the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause injury or damage to business or property.

Regulation 6, Rule 1

Pursuant to Regulation 6-1-303 a person shall not emit, from any source, for a period or periods aggregating more than three minutes in any hour, a visible emission that is as dark or darker than No. 2 on the Ringelmann Chart, or of such opacity as to obscure an observer’s view to an equivalent or greater degree, nor shall said emission, as perceived by an opacity sensing device in good working order, where such device is required by District Regulations, be equal to or greater than 40% opacity. The emergency engine is expected to meet the requirements of Regulation 6-1-303.

Regulation 9, Rule 1

The engine is subject to the SO₂ limitations of Regulation 9-1-301 (Limitations on Ground Level Concentrations of Sulfur Dioxide) and 9-1-304 (Burning of Solid and Liquid Sulfur Dioxide Fuel).

Pursuant to Regulation 9-1-301, the ground level concentrations of SO₂ shall not exceed 0.5 ppm continuously for 3 consecutive minutes or 0.25 ppm averaged over 60 consecutive minutes, or 0.05 ppm averaged over 24 hours. Pursuant to Regulation 9-1-304, a person shall not burn any liquid fuel having a sulfur content in excess of 0.5% by weight.. Compliance with Regulation 9-1 is expected due to the use of CARB low sulfur diesel fuel with a sulfur content of 0.0015% by weight.

Regulation 9, Rule 2

This rule limits the ground level concentrations of hydrogen sulfide to 0.06 ppm averaged over three consecutive minutes or 0.03 ppm averaged over any 60 consecutive minutes. The ozone generators, S-3, are being installed for odor control. Ozone generated by the ozone generators will normally exhaust out of the Regular Vent/Odor Control Unit Vent pipe at 324 cfm and will include emissions of hydrogen sulfide. On May 5, 2022, the Air District modeled H₂S emissions to determine whether S-3 (Ozone Generators) will comply with the Rule. S-3 will emit through one stack, the Regular Vent/Odor Control Unit Vent Pipe, in the normal operating condition, represented by Scenario 1. The stack outlet will be 6 inches in diameter. The exhaust flowrate

during normal operation will be 324 cfm. The H₂S concentration in the exhaust gas will be limited by permit condition to 1.0 ppm. At that concentration, the H₂S mass emissions will be about 0.0016 lb/hr. The annual emission rate will be 14.43 lb H₂S/yr.

According to the modeled H₂S emissions, the Air District determined that the facility would comply with Regulation 9, Rule 2 with a stack outlet of 13 feet above ground level and H₂S emissions of 1.0 ppm. At the stack outlet of 13 feet above ground level, the Air District estimated the maximum cumulative 1-hour concentration of H₂S to be $2.88 \mu\text{g}/\text{m}^3 = 0.0021 \text{ ppm}$ at the fence-line. Therefore, at an H₂S concentration of 1.0 ppm, the emissions of 0.0016 lb H₂S/hr will result in a maximum cumulative 1-hour average concentration of H₂S at the fence-line less than 0.03 ppm. Therefore, S-3 is in compliance.

Emissions at a concentration of 1.0 ppmv H₂S will result in a concentration at the fence-line that is about one-tenth of the limit. Therefore, the permit condition will require initial monitoring only. If the owner/operator shows initial compliance, ongoing monitoring will not be necessary.

Regulation 9, Rule 8

This rule limits the emissions of NO_x and CO from stationary internal combustion engines with an output rated by the manufacturer at more than 50 brake horsepower. The engine is intended to operate at a specific site for more than one year and will be attached to a foundation at the site. The requirements of this rule apply. In addition, the engine will be used for emergency use and is defined as an emergency standby engine pursuant to Regulation 9-8-230.

According to Regulation 9-8-110.5, emergency standby engines are exempt from the requirements of Regulations 9-8-301 through 305, 9-8-501, and 9-8-503. However, emergency standby engines are subject to the requirements of Regulation 9-8-330. Pursuant to Regulation 9-8-330, the engine will be allowed to operate 50 hours per calendar year for reliability-related activities. The requirements of the CARB ATCM are equivalent to the allowed annual reliability-related activity hours of this rule.

In accordance with Regulation 9-8-530, the engine shall be equipped with a non-resettable totalizing meter that measures hours of operation or fuel usage. Monthly records for the following shall be kept for at least 2 years and be made available to District staff upon request.

- Total hours of operation;
- Emergency hours of operation; and,
- The nature of the emergency condition for each emergency.

The engine is expected to meet the aforementioned requirements.

California Environmental Quality Act (CEQA)

Pursuant to Regulation 2-1-311, an application for a proposed new or modified source will be classified as ministerial and will accordingly be exempt from the CEQA requirement of Regulation 2-1-310 if the District's engineering evaluation and basis for approval or denial of the permit application for the project is limited to the criteria set forth in Regulation 2-1-428 and to the specific procedures, fixed standards, and objective measurements set forth in the District's Permit Handbook and BACT/TBACT Workbook. The engine evaluation was performed in

accordance with the criteria set forth in Chapter 2.3.1 of the Permit Handbook and is considered to be ministerial concerning air quality impacts.

In addition, with EBMUD acting as the lead agency, a Categorical Exemption from CEQA requirements was prepared by EBMUD on January 27, 2020, approved for filing with Alameda county on February 7, 2020, and forwarded to the Alameda County Clerk on February 18, 2020. This project was determined to be Categorically Exempt from CEQA requirements under guideline 14 CCR 15301(b) because the project consists of the repair and maintenance of existing public facilities as specified in the exemption.

Prevention of Significant Deterioration (PSD)

This application is not part of a PSD project as defined in Regulation 2-2.

California Health & Safety Code §42301.6 and Regulation 2-1-412

Pursuant to California Health & Safety Code §42301.6(a), prior to approving an application for a permit to construct or modification of a source, which is located within 1,000 feet from the outer boundary of a school site, the District shall prepare a public notice as detailed in §42301.6. §42301.9(a) defines a “school” as any public or private school used for the purposes of the education of more than 12 children in kindergarten or any grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes.

Using the GreatSchools.org website and searching with Google Maps, it has been determined that the source will be located within 1,000 feet of the outer boundary of a K-12 school site: Amelia Earhart Elementary School, located at 400 Packet Landing Road, Alameda, CA 94502. Therefore, the requirements of the California Health & Safety Code §42301.6 and Regulation 2-1-412 apply.

CONDITIONS

Permit Condition 22850 for S-2

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 27671 for S-3

1. The owner/operator shall ensure that ozone generation at S3 does not exceed 0.088 pounds total in any hour, or 0.044 pounds per unit in any hour.

[Basis: Regulation 2, Rule 5]

2. The owner/operator shall ensure that the hydrogen sulfide (H₂S) emissions from ozone generation at S3 do not exceed 1.0 ppmv, measured at the Regular Vent/Odor Control Unit Vent Pipe.

[Basis: Regulation 2-5, Regulation 9-2]

3. To demonstrate compliance with Part 2 of this condition, the owner/operator shall measure the concentration of H₂S at the outlet stack of S3 using Draeger tubes, a Jerome meter (provided the instrument is maintained and calibrated per manufacturer's specs and a bump test is performed and recorded prior to data collection), or other District approved method on a daily basis at least 5 days per week for the first two weeks of operation. The results from the first two weeks of testing shall be submitted to the Engineering Division. The owner/operator can cease monitoring if all readings show compliance with the full emission limit. If readings rise above the emission limit, monitoring frequency will continue until two months of consecutive compliance can be demonstrated, at which point testing shall again be submitted to the Engineering Division to cease testing. The cessation of monitoring will be handled administratively.

[Basis: Regulation 2-1-403, Regulation 2-5, Regulation 9-2]

4. The owner/operator shall maintain the following records:
 - a. H₂S volumetric concentration records from Part 3.

All records shall be retained onsite for two years from the date of entry and made available for inspection by District staff upon request. These recordkeeping requirements do not replace the recordkeeping requirements contained in any applicable District regulation.

[Basis: Regulation 9-2]

RECOMMENDATION

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 1,000 feet of a

school, 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 sources:

S-2 Emergency Standby Diesel Generator Set
Make: Cummins, Model: QSL2-GR9 NR3, Model Year: 2021
375 bhp, 2.49 MMBtu/hr

S-3 Ozone Generators (2)
Make: Titus Twister, Model: TT-20 Ozone Generator
20 grams/hour

By: _____
Ryan Atterbury
Air Quality Engineer

Date: _____