

# ENGINEERING EVALUATION AUTHORITY TO CONSTRUCT

**Facility Name:** Sharp Healthcare  
**Equipment Type:** [34H] California Certified Emergency Engine  
**Application #:** APCD2023-APP-007913  
**ID#:** APCD2023-SITE-04380  
**Equipment/Facility Address:** 1400 E Palomar St.  
Chula Vista, CA 91913  
**Facility Contact:** Doug Smith [General Foreman/Site Contact]  
(442) 248-2602  
[dsmith@baker-electric.com](mailto:dsmith@baker-electric.com)  
Alexander Kroeze [Contractor/Preparer]  
(760) 745-2001  
[akroeze@baker-electric.com](mailto:akroeze@baker-electric.com)

2/13/2024

**X** Austin Stein

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Austin Stein  
Jr. Air Pollution Control Engineer  
Signed by: E100885

**Permit Engineer:**

3/14/2024

**X** Nicholas Horres

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Nicholas Horres  
Senior Air Pollution Control Engineer  
Signed by: NHorres

**Senior Engineer Signature:**

## 1.0 Background

**1.1 Type of Application:** New installation of a 315 bhp emergency diesel engine powering a 200 kW standby generator

**1.2 Permit History:** This is the initial application for this equipment.

**1.3 Facility Description:** This is a healthcare facility in Chula Vista. This facility does not have any active permits with APCD. No other applications are open at this site.

**1.4 Other Background Info:** There are no hearing board actions, permit denials, legal settlements, NOV, or nuisance complaints associated with this site. The site is not a Title V facility.

## 2.0 Process Description

### 2.1 Equipment Description.

Emergency Diesel Engine Generator

Manufacturer: John Deere;

Model: 6068HFG85A;

S/N: TBD;

Horsepower (maximum rated): 315 bhp;

Model Year: 2022;

EPA Certification Tier: 3;

Engine Family (EPA): NJDXL13.5103;

Driving a 200 kW standby generator;

5-inch vertical exhaust with flapper raincap; 11.5 ft above ground.

### 2.2 Process Description.

This is a diesel-powered generator to be used in situations of emergency and for limited operations for maintenance and testing purposes for the Sharp Healthcare operation.

### 2.3 Emissions Controls.

This is a Tier 3 certified diesel engine. It is equipped with an aftermarket Johnson Matthey SDPF with emissions monitoring devices. This DPF is certified for the carryover engine family number CJDXL13.5103 but not for NJDXL13.5103 specifically. Since it is not certified for the proposed engine family number, alternative compliance is required to determine if manufacturer stated PM reduction values are accurate. To demonstrate this, Johnson Matthey has proposed to provide test data of emissions post-DPF when installed on an engine with similar characteristics as this application's engine, to show that the DPF will work correctly with the proposed engine and provide the stated PM reduction of at least 85%. This alternative compliance will be ensured by an ATC condition.

### 2.4 Attachments.

Generator specification sheet.

## 3.0 Emissions

**3.1 Emissions estimate summary.** Estimated emissions from the process are shown below.

**Table 1: Estimated PTE for criteria pollutants**

Compound	Emission Factor	Hourly Emissions	Daily Emissions	Annual Emissions	
	g/bhp-hr	lbs/hr	lbs/day	tons/year	lbs/yr
NO <sub>x</sub>	2.47	1.71	41.15	0.043	85.74
CO	0.09	0.06	1.49	0.002	3.11
NMHC	0.02	0.017	0.41	0.00043	0.85
PM	0.011	0.008	0.19	0.00019	0.39
SO <sub>x</sub>	NA	0.00324	0.078	0.000081	0.162

### 3.2 Estimated Emissions Assumptions

- Table 1 evaluates the emission unit at 24 hours per day and a total of 50 hours per year, assuming full load operations
- Estimated emissions are calculated for maintenance and testing operations. Emergency use is not counted towards operation limits.
- Combined Jonhson Matthey aftermarket DPF/DOC with 85% PM control, 70% control for VOC, 80% control for CO.
- Emissions calculated using these emission reduction percentages.
- 15 ppmw sulfur fuel
- Emission factors were EPA certified emission factors; Standard toxics emission factors for diesel engines.
- Expected actual emissions same as PTE.
- Other standard assumptions as stated in calculation sheets

### **3.3 Emissions Calculations.**

Calculations were performed using the attached spreadsheets using standard calculation methods.

### **3.4 Attachments.**

Emission Calculations.

## **4.0 Applicable Rules**

### **4.1 District Prohibitory Rules**

Emergency diesel engines at non-major sources are subject to the following District prohibitory rules: 50, 51, 53, 62 and 69.4.1. The proposed engine is expected to comply with all applicable requirements as shown in the table on the following page with standard permit conditions for this equipment type.

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**Table 2: Prohibitory Rule Discussion**

Applicable Section	Requirement	Engine Complies?	Explanation	Condition
<b>Rule 50</b>	Visible Emissions not to exceed 20% opacity or Ringelmann 1 for more than 3 minutes in a 60 minute period	Yes	Compliance with this requirement is achieved through the use of an EPA certified engine, and permit conditions will specify this requirement.	C28413
<b>Rule 51</b>	Cannot cause or contribute to a public nuisance	Yes	Due to the intermittent operation of an emergency engine that meets all emission requirements, it is anticipated that this will not cause a public nuisance. Permit conditions will prohibit this engine from causing a public nuisance.	C28414
<b>Rule 53</b>	Emissions of sulfur compounds calculated as SO <sub>2</sub> on a dry basis shall not exceed 0.05 % by volume on a dry basis.	Yes	Permit conditions will require use of CARB diesel fuel (15 ppm Sulfur by weight), which will ensure compliance with this requirement.	C28412
<b>Rule 62</b>	Sulfur content of liquid fuel shall not exceed 0.5 % sulfur by weight.	Yes	Permit conditions will require use of CARB diesel fuel (15 ppm Sulfur by weight), which will ensure compliance with this requirement.	C28412
<b>Rule 69.4.1</b>				
<b>69.4.1(d)(1)(ii)(E)</b>	Emission standards for NO <sub>x</sub> and CO emissions. For a new or replacement certified diesel engine, NO <sub>x</sub> emissions shall not exceed: 3.5 g/bhp-hr if 50≤bhp<100; 3.0 g/bhp-hr if 100≤bhp<175; 3.0 g/bhp-hr if 175≤bhp<750; 4.8 g/bhp-hr if bhp≥750. For a new or replacement certified diesel engine, CO emissions shall not exceed: 3.7 g/bhp-hr if 50≤bhp<100; 3.7 g/bhp-hr if	Yes	Use of an EPA certified tier 3 engine (tier 2 for engines with a rated power in excess of 750 bhp) ensures that NO <sub>x</sub> and CO emissions comply with this requirement. This engine is a tier 3; with an aftermarket DPF/DOC, therefore it complies with this requirement.	NA

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	100≤bhp<175; 2.6 g/bhp-hr if 175≤bhp<750; 2.6 g/bhp-hr if bhp≥750.			
<b>69.4.1(d)(2)</b>	Engines operated on diesel fuel shall use only California Diesel Fuel.	Yes	Permit conditions will require use of CARB diesel fuel (15 ppm Sulfur by weight), which will ensure compliance with this requirement.	C28412
<b>69.4.1(e)(3)</b>	All engines must be equipped with a non-resettable totalizing fuel or hour meter which shall be replaced in accordance with subsection (g)(7) of this rule.	Yes	Permit conditions will require installation of a non-resettable hour meter and specify the requirements for replacement.	C28419
<b>69.4.1(f)(2)</b>	The owner or operator must conduct periodic maintenance on the engine, according to engine/control equipment manufacturer's instructions or other written procedure, at least once each calendar year.	Yes	Annual maintenance of engine according to written procedure will be required by permit conditions.	C43433
<b>69.4.1(g)(1)</b>	Specifies engine information that must be maintained on-site.	Yes	Manufacturer and model number, brake horsepower rating, combustion method and fuel type are contained in the permit application. Documentation of CARB diesel fuel certification and manual of recommended maintenance will be specified in permit conditions.	C45251
<b>69.4.1(g)(2)</b>	Requires keeping an operating log containing dates and times and purpose of each period of engine operation, cumulative operation of engine for each calendar year and maintenance records including dates maintenance is performed.  Engines within 500 feet of schools must record the time of day when	Yes	Compliance with this provision is expected and this requirement is specified in permit conditions.	C45252

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	the engine is operated for testing and maintenance. Specific records for internal, external, and partial external power outages is required.			
<b>69.4.1(g)(6)</b>	Requires records of the dates and times when fuel is being combusted and cumulative operating time if claiming a commissioning exemption.	NA	The applicant has not claimed a commissioning period is needed.	NA
<b>69.4.1(g)(7)</b>	Requires notification to APCD within 10 calendar days of replacing an hour meter.	Yes	Compliance with this provision is expected and this requirement is specified in permit conditions.	C28419
<b>69.4.1(g)(9)</b>	Requires specified records to be maintained on-site for at least three years and made available to the District upon request.	Yes	Compliance with this provision is expected and this requirement is specified in permit conditions.	C43432
<b>69.4.1(i)(1)</b>	Requires periodic source testing to confirm compliance with applicable emission standards.	NA	This subsection does not apply to certified emergency engines.	NA

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### 4.2 New Source Review (NSR) Rule 20.1-20.4

This application is subject to District NSR rules. At the time of filing, this facility is not considered a major stationary source, for each pollutant, as shown in the following table, and is therefore subject to District Rule 20.2. Calculation of emissions and determination of applicable requirements is performed in accordance with District Rule(s) 20.1 through 20.3.

**Table 3: Classification of Major/PSD Source and Modification New Source Review (NSR) Requirements**

	<b>NOx</b>	<b>VOC</b>	<b>PM-10</b>	<b>PM-2.5</b>	<b>SOx</b>	<b>CO</b>	<b>Lead</b>
<i>Major Source Threshold (ton/year)</i>	50	50	100	100	100	100	100
<b>Major Source? (yes/no)</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<i>Major Modification Threshold (ton/year)</i>	25	25	15	10	40	100	0.6
<b>Major Modification at a Major Source?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>Contemporaneous Calculations Performed?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
Federal Major Stationary Source Threshold (ton/year) (Severe non-attainment status)	25	25	100	100	100	100	100
<b>Federal Major Stationary Source?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<i>Federal Major Modification Threshold (ton/year)</i> (Severe non-attainment status)	25	25	15	10	40	100	0.6
<b>Federal Major Modification?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>Contemporaneous Net Calculations Performed</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<i>PSD Threshold (ton/year)</i>	250	250	250	--	250	250	--
<i>PSD Modification Threshold (ton/year)</i>	40	40	15	--	40	100	0.6
<b>PSD New or Modification?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

District Rule 20.2 contains requirements for Best Available Control Technology (BACT), Air Quality Impact Assessment (AQIA), Prevention of Significant Deterioration (PSD) and public notification. Requirements of this rule apply; as shown in the table on the following page and sections 20.2(d)(1-2).

<b>Table 4: New Source Review Discussion</b>				
<b>Rule/Requirement</b>	<b>Requirement</b>	<b>Applicability</b>	<b>Discussion</b>	<b>Condition</b>
<b>Applicability</b>	Rule 20.2 applies to non-major stationary sources	Yes	This is a non-major stationary source, so Rule 20.2 applies.	NA
<b>Type of application</b>	New	Yes	NA	NA
<b>Exemptions</b>	No exemptions apply to this equipment	NA	NA	NA
<b>20.2(d)(1) – BACT</b>				
<b>BACT - NOx</b>	Installation of BACT is required if emissions of NOx exceed 10 lbs/day	<b>Triggered, see discussion below</b>	The potential to emit for this pollutant is 41.15 lbs/day, which does exceed this trigger level, so BACT is required.	NA
<b>BACT - VOC</b>	Installation of BACT is required if emissions of VOC exceed 10 lbs/day	Not triggered, no permit limit	The potential to emit for this pollutant is 0.41 lbs/day, which does not exceed this trigger level, so BACT is not required.	NA
<b>BACT - PM-10</b>	Installation of BACT is required if emissions of PM-10 exceed 10 lbs/day	Not triggered, no permit limit	The potential to emit for this pollutant is 0.19 lbs/day, which does not exceed this trigger level, so BACT is not required.	NA
<b>BACT - SOx</b>	Installation of BACT is required if emissions of SOx exceed 10 lbs/day	Not triggered, no permit limit	The potential to emit for this pollutant is 0.08 lbs/day, which does not exceed this trigger level, so BACT is not required.	NA
<b>20.2(d)(2) – AQIA</b>				
<b>AQIA - NOx</b>	Required for project emission increases in excess of 25 lbs/hr, 250 lbs/day or 40 ton/yr of NOx calculated as NO2	Not Triggered	The increase in emissions of this air contaminant from this project does not exceed any of these levels, so no AQIA is required.	NA
<b>AQIA - PM-10</b>	Required for project emission increases in excess of 100 lbs/day or 15 ton/yr of PM-10	Not Triggered	The increase in emissions of this air contaminant from this project does not exceed any of these levels, so no AQIA is required.	NA
<b>AQIA - SOx</b>	Required for project emission increases in excess	Not Triggered	The increase in emissions of this air contaminant from this project does not	NA

	of 25 lbs/hr, 250 lbs/day or 40 ton/yr of SOx calculated as SO2		exceed any of these levels, so no AQIA is required.	
<b>AQIA - CO</b>	Required for project emission increases in excess of 100 lbs/hr, 550 lbs/day or 1000 ton/yr of CO	Not Triggered	The increase in emissions of this air contaminant from this project does not exceed any of these levels, so no AQIA is required.	NA
<b>20.2(d)(3) - PSD</b>	Applicable to source that may have a significant impact on a class I area	NA	Emissions from this engine do not trigger PSD requirements.	NA
<b>20.2(d)(4) - Public Notice</b>	Requires 30 day public notice if an AQIA was required or if increase in VOC emissions from the project exceed 250 lbs/day or 40 ton/year	NA	AQIA was not required and VOC emission increase from this project does not exceed these levels.	NA

**20.2(d)(1) – BACT**

The PTE for NOx for the engine is 41.15 lbs./day, greater than the 10 lbs./day threshold for BACT. Therefore, a BACT analysis is required.

Alternatives that were considered include natural gas and propane engines and Tier 4f engines including SCR and DPF. Gas-fueled engines are not feasible as backup power for operations that must occur if natural gas lines are damaged in the event of an emergency like an earthquake. An engine of this size would also likely require SCR for emissions control, a method which is not cost effective as described below. The cost-effectiveness evaluation did not take into account the likely short periods of operation of this engine for maintenance. In many maintenance situations, the engine is operated at low loads and for approximately 30 minutes, some of which the SCR catalyst has not reached appropriate temperature for effectively controlling emissions.

**NOx Analysis:**

A tier 4 engine is the lowest emitting BACT option. Cost-effectiveness has previously been evaluated under applications APCD2021-APP-006831, and APCD2021-APP-006981, comparing incremental costs of a tier 2 vs. 4 engine, the results of which are summarized below. Note that this analysis is conservative and does not take into account the likely short periods of operation of this engine for maintenance as noted above which would lower the level of emission reductions achieved.

<i>Project</i>	<i>Engine Size (bhp)</i>	<i>Capital Cost Tier 2</i>	<i>Capital Cost Tier 4</i>	<i>Annual Cost Tier 2</i>	<i>Annual Cost Tier 4</i>	<i>Annual Incremental Cost</i>	<i>Annual Emission Reduction (lb/yr)</i>	<i>Cost Effectiveness</i>
6831	2346	\$329,050	\$603,826	\$127,026	\$200,228	\$73,202	1,112	<b>\$65.82</b>
6981	2937	\$810,000	\$1,200,000	\$131,824	\$195,294	\$63,471	1,322	<b>\$48.03</b>

This analysis shows that a Tier 4f engine, the lowest-emitting category of diesel engines, is not cost-effective. The analysis is based on the assumption that the engine allowed to run up to 50 hours per year for maintenance and testing, the maximum NOx emissions were calculated using the emission standards for a tier 2 and tier 4 engine. Capital costs were provided by the permit applicants which were annualized and added to expected maintenance and operating costs to determine an overall annual cost. While the previous analysis was conducted for larger engines, it is still representative for this application too because the equipment is very similar aside from engine size, and NOx emissions and costs are expected to scale roughly linearly with engine size. Additionally, the cost for an add-on SCR to a tier 2 engine is expected to have a similar cost to the incremental cost of a tier 4 engine, so this analysis also demonstrates that use of an SCR would not be cost effective, in addition to being technologically infeasible because it would not function during most periods of testing and maintenance.

The 315 bhp tier 3 engine proposed under this application would similarly not be cost effective. This is because a tier 3 engine does not have significantly different design than a tier 2 engine, has lower pre-secondary control emissions, and since costs would be expected to scale roughly linearly based on engine power for a smaller engine, any discrepancy would not be sufficient to alter the conclusion that a tier 4 final engine is not cost effective, especially considering that the 90% emission reduction achieved by SCR/Tier 4f engine would not likely be achieved during most testing and maintenance operations. This makes sense as a tier 3 engine has lower NOx emissions than a tier 2 engine, yet requires a similar level of add-on control costs to achieve tier 4 emission levels. For all these reasons, this demonstrates that a tier 4 engine or similar add-on controls including an SCR would not be cost effective.

A tier 3 certified engine is the next lowest emitting option and therefore satisfies BACT requirements for NOx.

**20.2(d)(2) – AQIA**

No AQIA limits were triggered by this engine, therefore no AQIA is required for this project.

### 4.3 Toxic New Source Review – Rule 1200

District Rule 1200 applies to any application that is part of a project which results in an emission increase of toxic air contaminants. The rule limits the increase in acute and chronic health hazard index (HHI) to no more than one from the project and limits the increase in cancer risk from the project to no more than one in one million if the engine is not equipped with Toxics BACT (T-BACT) or no more than ten in one million if the project meets T-BACT requirements. The following table contains an in-depth review of Rule 1200 requirements. If a refined HRA was required, the HRA report is attached.

**Table 5: Rule 1200 Applicable Requirements and Discussion**

Question	Answer	Discussion
Does the application result in an increase in toxic emissions?	Yes	The application results in an increase in toxic emissions of Diesel Particulate Matter or specific trace heavy metals and organics (as shown in emission calculations section).
Do any special exemptions apply to this equipment?	No	No exemptions apply to this equipment
Are there any other applications that are part of the project?	No	NA
What type of HRA was used?	Refined	Engine did not pass De Minimis and was sent for a refined HRA. See results attached.
Is the Project Equipped with T-BACT?	Yes	This engine is equipped with an aftermarket DPF which is not CARB certified for this engine family number but will show alternative compliance through test data from a similar engine, proving the PM reduction claims.
Cancer Risk increase (per one million)	0.472	Project meets standard of one in ten million.
Chronic HHI	$0.000127 \leq 1$	Meets standard of one.
Acute HHI	$0.0782 \leq 1$	Meets standard of one.
Passes Rule 1200?	Yes	Maintenance and testing (non-emergency operation) must be limited by permit conditions to 50 hours per calendar year

*Based on this analysis, pending alternative compliance test data showing PM reduction meets the values the manufacturer has stated, the proposed engine complies with all applicable requirements of District Rule 1200.*

### 4.4 AB3205

Requirements in the California Health and Safety Code in sections 42301.6 through 42301.9 (a.k.a. "AB3205 requirements") specify that prior to issuing an authority to construct for sources located within 1000 feet of a K-12 school, a 30-day public notification process must be conducted.

*This project is located within 1000 feet of a school (Heritage Elementary), so public notice is required for this section. A copy of the public notice is attached to the file and when the notice is issued, this evaluation and relevant attachments will be made available on the District's website for review. If any comments are received, they will be reviewed, considered and responded to prior to taking action on the permit including revising any requirements as necessary in response to comments received.*

#### **4.5 State and Federal Regulations.**

This engine is subject to both the State Air Toxic Control Measure for Stationary Engines (Stationary ATCM) and federal EPA issued National Emission Standards for Hazardous Air Pollutants (NESHAPs) and New Source Performance Standards (NSPS).

Applicable requirements of the Stationary ATCM include purchasing an engine certified to EPA standards and meeting specified emission standards of the rule, installing an hour meter, conducting maintenance according to a written plan, restrictions on operating the engine for purposes other than emergency use and limited (50 hours/year) use for maintenance and testing, and maintaining records to substantiate compliance with these requirements. This engine is expected to comply with all these requirements as described in the detailed analysis shown in the table following the discussion of NESHAP/NSPS requirements.

The NESHAP (subpart ZZZZ) requires that all new emergency engines comply with the rule by complying with the NSPS (subpart IIII). Applicable requirements of the NSPS include purchasing a certified engine, operating it as directed by the manufacturer, and maintaining records to substantiate compliance. These requirements closely mirror the ATCM requirements, except that the NSPS is somewhat less stringent regarding allowable PM emission rate and contains some allowance for other types of operation not allowed by the ATCM. This means the more stringent ATCM requirements apply. A detailed analysis of NESHAP and NSPS requirements is shown in the following table.

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**Table 6a: State and Federal Requirement Discussion (Stationary ATCM)**

Applicable Section	Requirement	Engine Complies/Expected to Comply?	Explanation	Condition
<b>Stationary ATCM</b>				
<b>93115.3</b>	There are no exemptions that apply to this engine	NA	This engine is not one of the engines exempted from any applicable requirements	NA
<b>93115.4</b>	Definitions. Permit conditions ensure that the engine only operates in a manner allowed for engines designated as "Emergency Standby"	Yes	Permit conditions require that the engine operate only as an emergency engine	C40239
<b>93115.5</b>	Requires the use of CARB diesel as fuel.	Yes	Permit conditions will require use of CARB diesel fuel (15 ppm Sulfur by weight), which will ensure compliance with this requirement.	C28412
<b>93115.6(a)(1)</b>	Prohibits non-emergency operation of an emergency engine between 7:30 AM and 3:30 PM during school days if within 500 feet of school and during all school sponsored activities if located on school grounds	Yes	This engine is equipped with a DPF but does not lower PM-10 emissions level to <0.01 g/bhp-hr, therefore it is not exempt from this rule. Permit conditions specify this requirement.	C28415
<b>93115.6(a)(2)</b>	Allows for engine to be started 30 minutes prior to rotating outage	Yes	Permit conditions specify this requirement.	C28560
<b>93115.6(a)(3)(A)(1)(b)</b>	Requires that all engines used for emergency purposes be certified to at least tier 3 standards (tier 2 for engines with a rated power in excess of 750 bhp) and have Diesel PM emissions less than 0.15 g/bhp-hr	Yes	Use of an EPA certified tier 3 engine (tier 2 for engines with a rated power in excess of 750 bhp) with PM emission below this level satisfies this requirement.	NEW_1

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			<p>This engine is fitted with an aftermarket DPF that is not CARB certified for this engine family number but will show alternative compliance to be technically effective at reducing the PM level below the stock engine's emission level.</p> <p>This is a tier 3 engine which has PM emissions below 0.15 g/bhp-hr without any emissions controls. As the proposed JM aftermarket DPF will be proven to lower PM emissions below the engine's factory values (ensured by an ATC condition requiring alternative compliance within 60 days of the construction completion notice), this engine will comply.</p>	
<b>93115.6(a)(3)(A)(1)(c)</b>	Restricts maintenance and testing operation to no more than 50 hours per calendar year	Yes	Permit conditions specify this requirement.	C28643
<b>93115.6(c)</b>	Does not allow emergency standby engines to operate as part of "demand response programs" unless additional requirements are met	Yes	Permit conditions specify this requirement.	C40907
<b>93115.10(a)-(b)</b>	Requires that specified information is submitted to the District as part of application package	Yes	The submitted application contained all of the required contact/location information, engine data, and emission information	NA
<b>93115.10(d)</b>	Requires installation of a non-resettable hour meter and for engines with DPFs, a backpressure monitor that alerts the operator when the backpressure limit of the engine is approached	Yes	Permit conditions require the installation and use of a non-resettable hour meter. Permit conditions require installation and use of a backpressure monitor between the engine and DPF.	C40721, C28419; C30028

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<b>93115.10(f)</b>	Specifies that the owner or operator must keep records and prepare a monthly summary of hours of operation and purpose (emergency, maintenance and testing, emission testing, start-up testing, other, demand response) of each period of operation	Yes	Permit conditions require that these records be kept and the summary updated monthly	C45252
<b>93115.10(f)</b>	Requires records of CARB diesel fuel certification	Yes	Permit conditions require that documentation of the CARB diesel certification for all fuel used be maintained	C43434
<b>93115.10(f)</b>	States that records must be kept on-site for at least 24 months and off-site for an additional 12 months (total 36 months)	Yes	Compliance with this provision is expected and this requirement is specified in permit conditions.	C43432
<b>93115.13(a)</b>	Allows the use of certification data or other emission test data to demonstrate compliance with emission limits	Yes	The manufacturer's engine rating specific emission data was used to determine compliance and for emission calculations	NA
<b>93115.13(f)</b>	For engines equipped with DPFs, allows the use of an engine certified to a PM-10 emission level of no more than 0.15 g/bhp-hr and a verified DPF in lieu of source testing (or other alternative means as listed)	Yes	<p>This engine is fitted with an aftermarket DPF that is not CARB certified for this engine family number but will show alternative compliance to be technically effective at reducing the PM level below the stock engine's emission level.</p> <p>Alternative compliance, showing PM emissions reductions as stated by the manufacturer, will be shown by manufacturer emissions test data of the proposed DPF with a similar engine to the proposed engine referenced in this application.</p>	NEW_1

			This is a tier 3 engine which has PM emissions below 0.15 g/bhp-hr without any emissions controls. As the proposed JM aftermarket DPF will be proven to lower PM emissions below the engine's factory values (ensured by an ATC condition requiring alternative compliance within 60 days of the construction completion notice), this engine will comply.	
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**Table 6a: State and Federal Requirement Discussion (Stationary ATCM)**

Applicable Section	Requirement	Engine Complies/Expected to Comply?	Explanation	Condition
<b>NESHAP ZZZZ</b>				
<b>40 CFR 63.6590(b)-(c)</b>	Requires that new emergency engines comply with the NESHAP by complying with the applicable NSPS	Yes	See NSPS section below.	NA
<b>NSPS IIII</b>				
<b>40 CFR 60.4205</b>	Requires that engines meet emission limits equivalent to tier 3 levels (tier 2 for engines 750 bhp or higher)	Yes	Use of an EPA certified tier 3 engine (tier 2 for engines with a rated power in excess of 750 bhp) with PM emission below this level satisfies this requirement. This is a tier 3 engine, therefore complies.	NA
<b>40 CFR 60.4207</b>	Sets maximum fuel sulfur limits for fuel equivalent to CARB diesel requirements	Yes	Permit conditions will require use of CARB diesel fuel (15 ppm Sulfur by weight), which will ensure compliance with this requirement.	C28412
<b>40 CFR 60.4209</b>	Requires installation of a non-resettable hour meter	Yes	Permit conditions require the installation and use of a non-resettable hour meter.	C28419

ENGINEERING EVALUATION  
 AUTHORITY TO CONSTRUCT

<b>40 CFR 60.4211(a)</b>	Requires that the engine be operated according to manufacturer's emission related instructions and that no changes are made to emission related settings unless allowed by manufacturer	Yes	Permit conditions specify this requirement.	C43433
<b>40 CFR 60.4211(c)</b>	Requires that the engine be certified under EPA regulations	Yes	Use of an EPA certified tier 3 engine (tier 2 for engines with a rated power in excess of 750 bhp). This is a tier 3 engine, therefore complies.	NA
<b>40 CFR 60.4211(e)</b>	Restricts operation of emergency engines for non-emergency purposes	Yes	Compliance ensured by permit conditions for ATCM limiting operation for maintenance and testing to no more than 50 hours per calendar year and restricting non-emergency operation for only those uses allowed by the permit (maintenance and testing). ATCM requirements more stringent than NSPS.	C40239, C40907, C28643
<b>40 CFR 60.4214(b)</b>	Requires records of operation to show that engine is operated as an emergency engine	Yes	Compliance is expected and specified in permit conditions.	C45252
<b>40 CFR 60.4214(c)</b>	For engines with DPFs, requires records of corrective actions taken when the high backpressure limit is approached	Yes	The engine is a certified Tier 3 engine that uses an aftermarket DPF. The engine is equipped with a backpressure monitor to ensure proper operation of the DPF which fulfills this requirement. Permit conditions specify following manufacturer's instructions which ensures compliance with this requirement.	C43433
<b>40 CFR 60.7(f)</b>	Requires that all records be maintained for at least 2 years	Yes	Compliance with this provision is expected and this requirement is specified in permit conditions.	C43432

# ENGINEERING EVALUATION ATTACHMENTS

## **4.6 Title V.**

This is not a Title V facility therefore this requirement does not apply.

## **5.0 Recommendations**

This equipment is expected to comply with all rules and regulations, and therefore it is recommended *(pending completion of the AB3205 noticing and comment process)* that an authority to construct be issued with the following conditions.

## **6.0 Recommended Conditions**

Conditions BEC APCD2020-CON-001715 with a 50 hour/year limit for non-emergency/maintenance and testing; 40” WC maximum engine backpressure and school limitations as PM does not meet <0.01 g/bhp-hr limit. Addition of ATC condition NEW\_1 will ensure alternative compliance demonstration is met within 60 days of the construction completion notice.

All relevant attachments are uploaded to BCMS under the corresponding application number.