

**AIR QUALITY  
MANAGEMENT DISTRICT****DRAFT AUTHORITY TO CONSTRUCT EVALUATION**

<b>APPLICATION NO.:</b>	<u>A/C 25698</u>
<b>REVIEW STARTING DATE:</b>	<u>6/13/18</u>
<b>ISSUING ENGINEER:</b>	<u>Joe Carle</u>

**I. PROJECT DESCRIPTION:****FACILITY NAME:** Verizon Wireless – Citrus Heights**LOCATION:** 7551 Greenback Ln., Citrus Heights, CA 95610**PROPOSAL:** Authority to Construct and Permit to Operate a diesel-fired emergency standby generator.**INTRODUCTION:** Verizon Wireless is a company that provides cellular phone service and accessories. Verizon Wireless is seeking an Authority to Construct and a Permit to Operate a diesel fired emergency standby generator which will replace the existing emergency standby generator (P/O 22521) at the cellular tower located at the address above.**EQUIPMENT DESCRIPTION:** Emergency standby engine.

Make:	Iveco/FTP
Model:	F4GE9485A*J
Serial No.:	TBD
Engine HP:	131 BHP @ 1800 RPM
Fuel Type:	Diesel
Displacement:	274.6 in <sup>3</sup>
Engine Family:	JFPXL06.7DGB
Model Year:	2018

**PROCESS RATE/FUEL USAGE:**

Equipment	Diesel Fuel Usage		
	Gallons/Hour (A)	Gallons/Day	Gallons/Quarter
IC Engine (Standby), 131 BHP	6.84	164	1,368

(A) Based on full standby load operation and using submitted Manufacturer Data.

**OPERATING SCHEDULE:** This application is for a standby emergency engine. For purposes of establishing the applicable BACT determination and for ensuring compliance with the ATCM for Stationary Compression Ignition Engines (Title 17, CCR, §93115), engine operation will be limited to 50 hours per year for maintenance and 24 hours per day, 200 hours per quarter and 200 hours per year for total use (maintenance and actual emergency operation). Twenty four hours a day is reasonable because it is an emergency engine and may in fact operate 24 hours per day.

**CONTROL EQUIPMENT EVALUATION:** The engine is certified to Tier 3 non-road emission standards.

## II. EMISSIONS CALCULATIONS:

1. **HISTORIC POTENTIAL EMISSIONS:** The equipment is being evaluated as a new emission unit; therefore its Historic Potential Emissions are as follows (Rule 202, §225):

Historic Potential Emissions		
Pollutant	Daily Historic Potential Emissions	Quarterly Historic Potential Emissions
VOC	0 lb/day	0 lb/quarter
NOx	0 lb/day	0 lb/quarter
SOx	0 lb/day	0 lb/quarter
PM10	0 lb/day	0 lb/quarter
PM2.5	0 lb/day	0 lb/quarter
CO	0 lb/day	0 lb/quarter

2. **PROPOSED POTENTIAL TO EMIT:** This application is for a standby emergency engine. During emergency episodes it can operate for up to 24 hr/day and for a maximum of 200 hours in a quarter or year, including both maintenance and emergency. Therefore, its Potential to Emit will be calculated assuming the engine operates (i) 24 hours per day, (ii) 200 hours per calendar quarter, and (iii) 200 hours per year.

Emissions are calculated using the following equation:

$$PTE = \frac{EF * HP * HRS}{U_{CF}}$$

Where

- PTE = Potential to Emit (lb/day, lb/quarter, lb/year)  
EF = Emission Factor (g/hp-hr)  
HP = Horse Power of engine  
HRS = Maximum hours of operation (hours/day, hours/quarter, hours/year)  
U<sub>CF</sub> = Unit conversion factor (453.6 g/lb)

Pollutant	Emission Factors (A) (g/hp-hr)	Potential to Emit (B)		
		lb/day	lb/quarter	lb/year
VOC (C)	1.14	7.9	66	66
NOx (C)	3.0	20.8	173	173
SOx	0.005	0.0	0	0
PM10	0.17	1.2	10	10
PM2.5	0.17	1.2	10	10
CO	3.7	25.6	214	214
GHG	519	1.8 tons/day	15 tons/quarter	15 tons/year
Lead	N/A	N/A	N/A	N/A

- (A) Emission factors for VOC and NOx are based on the District's BACT standards (Tier 3 standard). CO emission factor is based on the certified level for a Tier 3 engine. PM10 and PM2.5 emission factors include both the condensable portion and the filterable portion of the particulates. The filterable portion is based on the ATCM standard and the condensable portion is derived using the condensable to filterable fraction, taken from AP-42, Table 3.4-2 (10/96), multiplied by the certification standard  $((0.15 \text{ g/hp-hr} + 0.15 \text{ g/hp-hr} * 0.0077/0.0496) = 0.17 \text{ g/hp-hr})$ . SOx emission factor is based on AP-42, Table 3.3-1 (10/96) using a fuel sulfur content of 15 ppm. GHG emission factor is expressed as CO2e and is from EPA's Mandatory Reporting of Greenhouse Gases Rule (78 FR 71948, Nov. 29, 2013), Tables C-1 & C-2.
- (B) Emissions are based on 131 bhp, 24 hours/day, 200 hours/quarter and 200 hours/year of operation. All emission limits are in English units.
- (C) The engine is required to comply with the combined NOx + VOC emission standard. For the purpose of calculating NOx and VOC individually, VOC emissions are assessed at the worst case scenario of the uncontrolled AP-42 emission factor of 1.14 g/bhp-hr and NOx emissions are assessed at the worst case limit of 3.0 g/bhp-hr.

### III. COMPLIANCE WITH RULES AND REGULATIONS:

- H&S § 42301.6 (AB 3205) COMPLIANCE:** The engine will be located on the grounds of San Juan High School. There are no other K-12 schools within ¼ mile radius of the source. San Juan High School is located at 7551 Greenback Lane. A public notice will be distributed to the parents or guardians of the children that attend the school and all addresses within 1,000 feet of the engines pursuant to the provisions of Health & Safety Code § 42301.6.

#### 2. NSR COMPLIANCE:

##### Rule 202 – New Source Review

##### Section 301 – Best Available Control Technology

BACT is triggered for any pollutant for which the emission increase ( $BACT_{EI}$ ) calculated pursuant to Rule 202, Section 411.1 exceeds the levels specified below. For purposes of this calculation, the difference is done using tenths, then the difference is rounded to an integer using standard rounding convention (round up if greater than or equal to 0.5):

BACT is triggered if:

$$BACT_{EI} > BACT_{TL}$$

Where:

$BACT_{EI}$  = Emissions Increase = (DPE – DHPE)  
DPE = Daily Potential Emissions (from Section II.2)  
DHPE = Daily Historic Potential Emissions (from Section II.1)

$BACT_{TL}$  = Pollutant  $BACT_{TL}$   
VOC 0 lb/day  
NOx 0 lb/day  
SOx 0 lb/day  
CO 550 lb/day  
PM10 0 lb/day  
PM2.5 0 lb/day  
Lead 3.3 lb/day

Determination of BACT Applicability:

Pollutant	DPE (lb/day)	DHPE	$BACT_{EI}$ (lb/day)	$BACT_{TL}$ (lb/day)	Is BACT Required?
VOC	7.9	0	8	>0	Yes
NOx	20.8	0	21	>0	Yes
SOx	0.0	0	0	>0	No
PM10	1.2	0	1	>0	Yes
PM2.5	1.2	0	1	>0	Yes
CO	25.6	0	26	>550	No
Lead	0	0	0	>3.3	No

The proposed NOx, VOC, PM10, and PM2.5 emissions exceed the BACT trigger levels specified in this section and are therefore subject to BACT.

SMAQMD's BACT Determination for standby IC engines with a rating of greater or equal to 50 BHP (BACT No. **172**) was last reviewed on **04/10/18**. Since less than two years have passed since the time the of the last BACT review and the time the application was deemed complete, and the SMAQMD is not aware of any significant changes to BACT requirements for engines in this size category, this BACT determination will be considered current and valid for this permit application.

Determination of Compliance with BACT Requirements:

<b>BACT Compliance Standby IC Engines with a Rating of Greater or Equal to 50 BHP</b>		
Pollutant	District BACT Standard BACT No. 172 (g/hp-hr)	Manufacturer's Emissions Data (A) (g/hp-hr)
VOC + NOx (C)	3.0	2.8
SOx	0.005 Fuel with < 0.0015% sulfur content by weight	Not applicable, This engine does not trigger BACT
PM10 (B)	0.15	0.12
PM2.5 (B)	0.15	0.12
CO	3.7	Not applicable, This engine does not trigger BACT

(A) Based on Generac's Statement of Exhaust Emissions 2018 FPT Diesel Fueled Generator (Doc No. 100000028469). The District does not use manufacturer's data as BACT because the data is for an engine family and it is not engine specific and does not account for degradation, variability and other factors.

(B) Based on filterable PM only.

(C) For purposes of VOC and NOx compliance the District uses the VOC+NOx certification standard for standby engines.

The manufacturer's emissions data for the Iveco/FPT F4GE9485A\*J diesel engine for VOC, NOx, PM10, and PM2.5 demonstrate compliance with the BACT standards.

Section 302 – Offsets Emergency electrical generating, flood control, and firefighting equipment are exempt from the requirement to provide emission offsets by Section 110 provided the following conditions are met:

1. The installation of the equipment will not result in a major modification or be a major stationary source, in and of itself, and
2. Operation for maintenance purposes is limited to 100 hours per year (engine will be limited to 50 hours per year for T-BACT compliance), and such maintenance must be scheduled in cooperation with the District so as to limit air quality impact, and
3. Operation of the equipment must be limited to a total of 200 hours per year, and
4. The equipment is not used to supply power to a serving utility for distribution on the grid, and
5. Operation is limited to maintenance operation, emergency operation to supply power when there is an actual interruption of electrical power from the serving utility or emergency water pumping for flood control, firefighting, potable water pumping, or sewage pumping.

Conditions will be placed on the Authority to Construct and Permit to Operate indicating these limitations.

The following are the permitted emission units at the Stationary Source and the criteria pollutant quarterly permitted emissions:

All units at this facility/stationary source were installed after January 1, 1977.

**STATIONARY SOURCE POTENTIAL TO EMIT FOR VOC AND NO<sub>x</sub> (SAME FOR ALL 4 QUARTERS):**

Permit No.	Emissions Unit	Stationary Source Potential to Emit lb/quarter	
		VOC	NO <sub>x</sub>
P/O 22521	IC Engine Standby (99.15 BHP)	Replaced by A/C 25698	
A/C 25698	IC Engine Standby (131 BHP)	66	173
Total		66	173
Offset Trigger Level		≥5,000	≥5,000

**STATIONARY SOURCE POTENTIAL TO EMIT FOR SO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, AND CO (SAME FOR ALL 4 QUARTERS):**

Permit No.	Emissions Unit	Stationary Source Cumulative Emission Increase Since 01-01-77			
		ton/year	lb/quarter		
		PM <sub>2.5</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO
P/O 22521	IC Engine Standby (99.15 BHP)	Replaced by A/C 25698			
A/C 25698	IC Engine Standby (131 BHP)	0.005	0	10	214
Total		0.005	0	10	214
Offset Trigger Level		≥ 15	≥ 13,650	≥ 7,300	≥ 49,500

**Section 308 – CEQA** The California Environmental Quality Act (CEQA) is a statute that requires state and local agencies to identify the significant adverse environmental impacts of their actions and to avoid or mitigate those impacts to the extent feasible. The first step in the review of projects subject to CEQA is to determine if the project is exempt from CEQA.

The State CEQA Guidelines (SCG) provides that, “Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.” (SCG §15061(b)(3)) Based on the environmental analysis below staff have concluded that the project is exempt from CEQA because there is no possibility that the project will have a significant adverse effect on the environment.

As shown in the table below, the project’s operational phase emissions, or permitted emission limits are well below the SMAQMD Thresholds of Significance:

Pollutant/Hazard		Threshold	Project Total (D)	Rounded Project Total (B)	Less than Standard?
NOx (ozone precursor)		65 lb/day	0.9 lb/day	1 lb/day	Yes
VOC (ozone precursor)		65 lb/day	0.3 lb/day	0 lb/day	Yes
PM10 (A)	Daily	80 lb/day	0.0 lb/day	0 lb/day	Yes
	Annual	14.6 tons/year	0.001 tons/year	0 tons/year	Yes
PM2.5 (A)	Daily	82 lb/day	0.0 lb/day	0 lb/day	Yes
	Annual	15 tons/year	0.001 tons/year	0 tons/year	Yes
Cancer Risk (per million)		10	2.2 (C)	2 (C)	Yes
Acute Non-Cancer Health Hazard		1.0	N/A (C)	N/A (C)	N/A
Chronic Non-Cancer Health Hazard		1.0	0.002 (C)	0 (C)	Yes
GHG as CO2e	Operational Phase	10,000 metric tons/year	3.4 metric tons/year	3 metric tons/year	Yes

- (A) Operational phase CEQA significance threshold for PM10 and PM2.5 is zero (0) for projects that fail to apply all feasible BACT. The thresholds for projects that apply all feasible BACT is 82 lb/day and 15 ton/year for PM10 and 80 lb/day and 14.6 ton/year for PM2.5.
- (B) The District uses conventional rounding methods to determine what numbers round to zero. For BACT purposes the District has determined that an emissions level of 0.49 lb/day rounds to 0. Using this same methodology, the emissions from this operation are rounded to 0 lb PM10, PM2.5/day and 0 ton PM10, PM2.5/year.
- (C) See Health Risk Assessment analysis under Rule 402 in Sec. 3. Prohibitory Rule Compliance.
- (D) For emergency equipment, operational phase emissions are based on predictable maintenance operation and do not include unforeseen emergency episodes. For emergency engines, typical daily maintenance hours are 1 hour/day and typical annual maintenance hours are 50 hours/year. GHG emissions were converted from US tons to metric tons by using the conversion of 0.907 metric ton/US ton.

In addition to the exemption from CEQA for a project that demonstrates no possibility of a significant effect on the environment, CEQA review is also exempt for permitting actions that are considered ministerial. Under the District "Guidance Document, Permit Actions and CEQA Applicability," section 5.1.1(f), issuance of an ATC is considered ministerial unless it requires the establishment of a new BACT standard. This project does not require a new BACT standard but rather relied on an existing BACT standard published in SMAQMD's BACT Clearinghouse (No. 172), thus making the permitting action ministerial and exempt from CEQA.

Therefore, upon approval of the project, the SMAQMD will issue the Authority to Construct and file a Notice of Exemption with the Sacramento County Clerk. The notice will be posted for 35 days and the evaluation and Authority to Construct will be made available for public inspection.

Section 406 – Submittal of BACT Determinations: This permit action relied on an existing BACT determination already published on SMAQMD's BACT Clearinghouse. Therefore, this section does not apply.

**Rule 203 – Prevention of Significant Deterioration**

A source or modification triggers PSD if:

- Its potential to emit any one pollutant is greater than or equal to 100 tons/year if it is one of the 28 selected industrial categories in 42 U.S.C. Section 7479 (1), or greater than or equal to 250 tons/year for all other categories; or
- It is part of a major stationary source and the project's net emissions increase for any pollutant will be greater than the significance levels listed below:

Pollutant	Level of Significance (Tons/Year)
CO	100
NOx	40
SOx	40
PM	25
PM10	15
PM2.5	10 (PM2.5) or 40 (SO <sub>2</sub> ) or 40 (NO)
Ozone	40 of NOx or VOCs
Lead	0.6
Fluorides	3
Sulfuric acid mist	7
H <sub>2</sub> S	10
Total reduced sulfur (including H <sub>2</sub> S)	10
Reduced sulfur compounds (including H <sub>2</sub> S)	10
Greenhouse Gases (CO <sub>2</sub> e)	75,000

There are no emissions sources at the facility that appear to have the potential to emit over 100 or 250 tons per year, and as demonstrated in Section II.2, the emissions from this engine are so low they would not cause the facility to exceed the threshold when analyzed cumulatively. Since this is not a major source, it is not necessary to consider the major modification significance levels, but nonetheless, Section II.2 indicates that annual emissions are well below the levels of significance.

**Rule 214 – Federal New Source Review**

This rule does not apply because this permit action is not for a new major stationary source or a modification at an existing major stationary source.



### **Rule 217 – Public Notice Requirements for Permits**

Sections 401-402 – CARB, EPA, and Public Notification: The public noticing requirements of Rule 217 do not apply if:

- Offsets are not required under Rule 202, Section 302.
- A visibility analysis is not required under Rule 214, Section 413.
- The increase in potential to emit for the project, calculated under Section 403 of Rule 217, is below the following limits:

Pollutant	lb/quarter
VOC	5,000
NOx	5,000
SOx	9,200
PM10	7,300
PM2.5	10 TPY
CO	49,500

Analysis:

- As determined in Section III.2, offsets are not required.
- This permit action is not subject to Rule 214, so the visibility analysis required by Section 413 of Rule 214 is inapplicable.
- As shown below, the increase in potential to emit does not exceed the notification exemption thresholds:

<b>Increase in Potential to Emit</b>					
Pollutant	Potential to Emit for the Project		Increase in PTE	Notification Threshold	Notification Required?
	Pre-Application	Post-Application			
VOC	0	66 lb/quarter	66 lb/quarter	≥ 5,000	No
NOx	0	173 lb/quarter	173 lb/quarter	≥ 5,000	No
SOx	0	0 lb/quarter	0 lb/quarter	≥ 9,200	No
PM10	0	10 lb/quarter	10 lb/quarter	≥ 7,300	No
PM2.5	0	0.005 TPY	0.005 TPY	≥ 10 TPY	No
CO	0	214 lb/quarter	214 lb/quarter	≥ 49,500	No

### **3. PROHIBITORY RULE COMPLIANCE:**

#### **Rule 401 – Ringelmann Chart**

The permit will include conditions requiring that the IC engine comply with the Ringelmann No. 1 or 20% opacity standard and in the District's experience, properly maintained engines are able to meet the requirement. The equipment will be inspected prior to the issuance of the permit to operate and on a regular basis thereafter to ensure continuous compliance.

## Rule 402 – Nuisance

The District regulates emissions of toxics substances for engines under Rule 402, SMAQMD's guidance document, Health Risk Management Programs For Existing, Modified and New Stationary Sources (March 24, 2016) and ATCM's adopted by CARB.

The health risk action levels and results are summarized below.

Health Risk Action Levels and Assessment Summary				
Type of Health Risk	Permitting Thresholds <sup>(A)</sup>		Project HRA Results <sup>(B)</sup>	
	T-BACT	Maximum	Residential	Worker/School
Cancer Risk (Chances per Million)	≥ 1.0	10.0	0.8	2.2
Acute Non-Cancer (Hazard Index)	≥ 1.0	1.0	NA	NA
Chronic Non-Cancer (Hazard Index)	≥ 1.0	1.0	2.3E-04	1.7E-03

(A) In certain circumstances, the District may allow a health risk in excess of the levels specified here. For more information, see SMAQMD's guidance document, Health Risk Management Programs for Existing, Modified and New Stationary Sources (2016).

(B) Results have been rounded to one decimal place.

Diesel particulate matter (PM) has been identified as a carcinogen by the Office of Environmental Health Hazard Assessment (OEHHA).

The following factors, formulas, and assumptions were taken into consideration in order to estimate the worst case excess cancer risk and the non-cancer health risks for the toxic pollutants emitted.

The project's emissions are modeled with the use of an EPA approved air dispersion model to determine the concentrations of toxic pollutants at residential and non-residential receptors surrounding the project. The model used for this analysis is Lakes Environmental's AERMOD View, Version 9.4.0. The following parameters were used as inputs to the model for each engine:

Release Height:	9 feet
Gas Exit Temperature:	887 °F
Stack Diameter:	3 in.
Gas Exit Flow Rate:	782 acfm
Nominal Emission Rate:	1.0 g/s

SMAQMD utilizes the California Air Resources Board's Hotspots Analysis and Reporting Program (HARP2), Version 17023 model which incorporates the health risk assessment methodologies from the "Risk Assessment Guidelines - Guidance Manual for Preparation of Health Risk Assessments" (February 2015).

### CANCER RISK ASSESSMENT:

From equation 5.4.1.1 and 8.2.4 A:

$$\text{Riskair} = \text{Cair} * (\text{BR}/\text{BW}) * \text{A} * \text{EF} * \text{CPF} * \text{ED}/\text{AT} * (1\text{E}-06) * (\text{GLC}) * \text{ASF} * \text{FAH}$$

Where:

Riskair	= Cancer risk from inhalation exposure
Cair	= Concentration ( $\mu\text{g}/\text{m}^3$ )
(BR/BW)	= Breathing Rate/Body Weight = 361 (l/kg-day) 95%, 3 <sup>rd</sup> Trimester = 1090 (l/kg-day) 95%, 0<2 yrs = 631 (l/kg-day) 80%, 2<9 yrs = 572 (l/kg-day) 80%, 2<16 yrs = 261 (l/kg-day) 80%, 16<30 yrs = 233 (l/kg-day) 80%, 16<70 yrs = 230 (l/kg-day) 8 hr worker rate
A	= Inhalation Absorption Factor (default = 1)
EF	= Exposure Frequency = 350 days for Res = 250 days for Non-Res
CPF	= Cancer Potency Factor (kg-day/mg)
ED	= Exposure Duration, 30 years Res, 25 years Non-Res
AT	= Averaging Time, 25,550 days
ASF	= Age sensitivity factor for a specified age group
FAH	= Fraction of time spent at home (use 1 for children under 16 when a school is within a 1 in a million cancer risk isopleth) = 0.85, 3 <sup>rd</sup> Trimester = 0.85, 0<2 yrs = 0.72, 2<9 yrs = 0.72, 2<16 yrs = 0.73, 16<30 yrs = 0.73, 16<70 yrs
(1E-06)	= ( $\text{mg}/1000 \text{ ug}$ )*( $\text{m}^3/1000 \text{ l}$ )
GLC	= Ground Level Adjustment Factor = 1.0 for resident = 4.2 (7/5 x 24/8) for worker for equipment that, although limited, operates during normal work hours

### CANCER RISK SUMMARY:

Permit No.	Receptor (Worst Case)	TAC	Excess Cancer Risk (risk in a million)
A/C 25698	Residential - (Located at Receptor #2085, UTM: 649153, 4282832)	Diesel Exhaust	0.8
	Non-Residential/School - (Located at Receptor #2073,UTM: 649106, 4282708)	Diesel Exhaust	2.2

**NON-CANCER RISK ASSESSMENT:** The chronic non-cancer health risk is determined for a given pollutant by dividing the pollutant's annual average ambient air concentration ( $\text{ug}/\text{m}^3$ )

by the chronic reference exposure level of that pollutant in order to obtain the chronic hazard index (HI). The acute non-cancer health risk is determined by dividing the pollutant's maximum hourly ambient air concentration ( $\mu\text{g}/\text{m}^3$ ) by the acute reference exposure level in order to obtain the acute hazard index (HI). In addition, each contaminant can affect different organs of the body and several compounds may affect common organs. Therefore, when there are multiple toxic compounds involved, the effects are additive for the common organs.

A list of chronic or acutely hazardous air contaminants may be found at the OEHHA website [www.oehha.ca.gov](http://www.oehha.ca.gov). The method of calculating the HI numbers (Risk Assessment Guidelines) is also found at this website.

The hazard index for the organs affected are shown below:

Toxic Air Pollutant	Target Organ Affects – Acute HI (Residential)									
	Alimentary Tract	Cardiovascular	Developmental	Eye	Hematologic	Immune	Nervous	Reproductive	Respiratory	Skin
Diesel Exhaust	X	X	X	X	X	X	X	X	X	X

Toxic Air Pollutant	Target Organ Affects – Chronic HI (Residential)												
	Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
Diesel Exhaust	X	X	X	X	X	X	X	X	X	X	X	2.28E-04	X

Toxic Air Pollutant	Target Organ Affects – Acute HI (Non-Residential/School)									
	Alimentary Tract	Cardiovascular	Developmental	Eye	Hematologic	Immune	Nervous	Reproductive	Respiratory	Skin
Diesel Exhaust	X	X	X	X	X	X	X	X	X	X

Toxic Air Pollutant	Target Organ Affects – Chronic HI (Non-Residential/School)												
	Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
Diesel Exhaust	X	X	X	X	X	X	X	X	X	X	X	1.66E-03	X

#### NON-CANCER RISK SUMMARY:

Permit No.	Receptor (Worst Case)	TAC	Hazard Index
A/C 25698	Residential (Located at Receptor #2085, UTM: 649153, 4282832)	Diesel Exhaust	2.28E-04
	Non-Residential/School (Located at Receptor #2073, UTM: 649106, 4282708)	Diesel Exhaust	1.66E-03

**HRA CONCLUSION:** The health risk for this project is considered acceptable to the SMAQMD because:

- The evaluated cancer risk for a maximum exposed individual resident (MEIR) is 0.8 in one million, which is below the significant risk threshold.
- The evaluated cancer risk for a maximum exposed individual worker (MEIW) and the school's point of maximum impact is 2.2 in one million, which is below the significant risk threshold. However, since the cancer risk exceeds 1 in one million, T-BACT will be required. SMAQMD has determined that the installation of Tier 3 engines with a Diesel PM emission factor below 0.15 g/bhp-hr meets T-BACT for PM.
- The evaluated noncancer Acute Hazard Index is less than one for the maximum exposed individual resident (MEIR), the maximum exposed individual worker (MEIW), and the school's point of maximum impact.
- The evaluated noncancer Chronic Hazard Index is less than one for the maximum exposed individual resident (MEIR), the maximum exposed individual worker (MEIW), and the school's point of maximum impact.

#### Rule 406 – Specific Contaminants

The proposed equipment is not expected to exceed the emissions limit of 0.2% by volume sulfur compound as SO<sub>2</sub> and 0.1 gr/dscf for combustion contaminants calculated to 12% CO<sub>2</sub>.

Diesel Fuel F-Factor	=	9190 dscf/mmBTU
Molar Volume	=	385.3 ft <sup>3</sup> /mol
Diesel HHV	=	19,300 BTU/lb
Conversion Factor	=	15.432 gr/g
PM10 Emission Factor	=	0.17 g/hp-hr
SO <sub>2</sub> Emission Factor	=	0.005 g/hp-hr

BSFC	=	7000 BTU/hp-hr
Weight % C in Diesel	=	87 % or 0.87 lb C/lb fuel
C to CO <sub>2</sub> Conversion Efficiency	=	0.99

**PM<sub>10</sub> Concentration** (combustion contaminants):

- A. Calculate uncorrected grain loading  
= (0.17 g/hp-hr) x (15.432 gr/g) x (hp-hr/7000 BTU) x (1E6 BTU/mmBTU) x (mmBTU/9190 dscf)  
= 0.04078097 gr/dscf
- B. Calculate CO<sub>2</sub> emission factor (lb CO<sub>2</sub>/mmbtu) assuming 100% C to CO<sub>2</sub> conversion  
= (0.87 lb C/lb fuel) x (mol C/12 lb C) x (mol CO<sub>2</sub>/mol C) x (44 lb CO<sub>2</sub>/mol CO<sub>2</sub>) x (lb fuel/19300 BTU) x  
(1E6 BTU/mmBTU)  
= 165.2849741 lb CO<sub>2</sub>/mmBTU
- C. Calculate lb CO<sub>2</sub>/mmBTU at 99% Conversion  
= 165.2849741 lb CO<sub>2</sub>/mmBTU x 99%  
= 163.6321244 lb CO<sub>2</sub>/mmBTU
- D. Calculate volume % of CO<sub>2</sub> in Exhaust Gas  
= % CO<sub>2</sub>  
= mol CO<sub>2</sub>/mol exhaust  
= (163.6321244 lb CO<sub>2</sub>/mmBTU) x (mol CO<sub>2</sub>/44 lb CO<sub>2</sub>) x (mmBTU/9190 dscf) x (385.3 dscf/mol exhaust)  
= 0.155919125 mol CO<sub>2</sub>/mol exhaust or 15.5919125 % CO<sub>2</sub>
- E. Calculate corrected grain loading  
= (0.04078097 gr/dscf) x (12% CO<sub>2</sub>/15.5919125% CO<sub>2</sub>)  
= 0.031 gr/dscf corrected to 12% CO<sub>2</sub>

**OR**

**Simplified Equation**

$$\begin{aligned} &= (0.17 \text{ g/hp-hr}) \times (15.432 \text{ gr/g}) \times (\text{hp-hr}/7000 \text{ BTU}) \times (0.12 \text{ mol CO}_2/\text{mol exhaust}) \times (\text{lb fuel}/0.87 \text{ lb C}) \\ &\quad \times (12 \text{ lb C/mol C}) \times (\text{mol C/mol CO}_2) \times (19300 \text{ BTU/lb fuel}) / (0.99) \times (\text{mol exhaust}/385.3 \text{ dscf}) \\ &= 0.031 \text{ gr/dscf corrected to 12\% CO}_2 \end{aligned}$$

**SO<sub>2</sub> Concentration** (% SO<sub>2</sub> by volume):

The following calculation is at 0% excess air which represents worst case.

$$\begin{aligned} &= (0.005 \text{ g/hp-hr}) \times (\text{lb SO}_2/453.6 \text{ g}) \times (\text{hp-hr}/7000 \text{ BTU}) \times (1\text{E}6 \text{ BTU/mmBTU}) \times (\text{mmBTU}/9190 \text{ dscf}) \\ &\quad \times (\text{mol SO}_2/64 \text{ lb SO}_2) \times (385.3 \text{ dscf/mol exhaust}) \\ &= 0.000001032 \text{ mol SO}_2/\text{mol exhaust or } 0.0001032 \% \text{ SO}_2 \end{aligned}$$

The rule emission limits for SO<sub>2</sub> and PM are 0.2% SO<sub>2</sub> by volume and 0.1 grains/cf at 12% CO<sub>2</sub>, respectively. Therefore, the emissions from the engine comply with Rule 406.

**Rule 420 – Sulfur Content of Fuels**

This rule limits the sulfur content of fuel. It was last amended in 1981, and CARB has subsequently adopted more stringent standards, which limit the sulfur content of diesel no. 2 motor fuel @ <0.0015%S. The permit will include conditions limiting the use of fuel to CARB-approved fuels or alternative fuels that comply with the CARB regulations, which will ensure compliance with this Rule.

#### 4. NSPS COMPLIANCE:

The list of all adopted New Source Performance Standards as listed in 40 CFR 60 (<http://yosemite.epa.gov/r9/r9nspns.nsf/ViewStandards?ReadForm&Part=60>) were reviewed to determine if the proposed project is subject to one or more of these regulations. One applicable provision was identified:

SUBPART IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines are applicable to any of the following:

- A. Engines with a displacement of less than 30 liters per cylinder where the model year is 2007 or later for non-fire pump engines and the model year listed in Table 3 of this subpart for fire pump engines.
- B. Owners or operators of engines that commence construction after July 11, 2005 where the engine is manufactured after April 1, 2006 for a non-fire pump engine or for engines manufactured as a certified National Fire Protection Association (NFPA) fire pump after July 1, 2006.
- C. Owners and operators of engines that modify or reconstruct their engine after July 11, 2005.

The engine was manufactured in 2018 and has a displacement of less than 30 liters per cylinder, therefore, the engine is subject to subpart IIII.

NSPS requirements and Analysis:

- A. The engine must meet the non-road standard in Table 1 of 40 CFR 60.89.112 that is applicable to the engine size and year of manufacture. The engine meets this requirement because it has been certified to the tier 3 standard.
- B. The fuel used must meet the requirements specified in 40 CFR 80.510(b). The engine meets this requirement because the permit will be conditioned to limit fuels used to CARB diesel and CARB diesel complies with the federal fuel specification.
- C. The engine must have an hour meter installed. The permit will include a condition requiring an hour meter.
- D. This NSPS limits engine operation for maintenance purposes to 100 hours per year. The permit will include a condition limiting engine operation to 50 hours per year for maintenance purposes.

#### 5. NESHAP COMPLIANCE:

NESHAPs under 40 CFR, Part 61: The list of all adopted National Emission Standards for Hazardous Air Pollutants (<http://yosemite.epa.gov/r9/r9nspns.nsf/ViewStandards?ReadForm&Part=61>) were reviewed to determine if the proposed project is subject to one or more of these regulations. There are currently no 40 CFR, Part 61 NESHAPs applicable to this source category.

NESHAPs under 40 CFR, Part 63: The District has not requested nor obtained delegation of Part 63 NESHAPs. However, these NESHAPS are being enforced as state Air Toxic Control Measures (ATCMs) pursuant to Health and Safety Code, Sections 39658(b) and 39666(d). The list of all adopted National Emission Standards for Hazardous Air Pollutants (<http://yosemite.epa.gov/r9/r9nspns.nsf/ViewStandards?ReadForm&Part=63>) were reviewed to determine if the proposed project is subject to one or more of these regulations. One applicable provision was identified:

Subpart ZZZZ – National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating

internal combustion engines (RICE) located at both major and area sources of HAP emissions.

The engine is subject to this part because it is considered a new RICE since construction will be commenced after June 12, 2006 at an area source.

The requirements of this NESHAP subpart require the engine to comply with the emission requirements specified in 40 CFR 60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines). As mentioned above this engine complies with these requirements because it is certified to the appropriate standard, will utilize CARB diesel, and will have an hour meter installed.

6. **ATCM COMPLIANCE:** The list of all adopted Airborne Toxic Control Measures (<http://www.arb.ca.gov/toxics/atcm/atcm.htm>) was reviewed to determine if the proposed project is subject to one or more of these regulations.

Airborne Toxic Control Measure For Stationary Compression Ignition Engines (Title 17, CCR Sections 93115-93115.15: The engine is stationary, greater than 50 hp, utilizes a compression ignition power cycle, and is therefore subject to this rule. To comply with this rule, the permit will contain conditions requiring that the engine meet a PM emission rate of 0.15 g/hp-hr or less, limit other criteria pollutants to EPA Tier 3 levels, operate no more than 50 maintenance hours per year and 200 total hours per year, monitor usage with a non-resetting 4 digit totalizer, and operate with CARB verified diesel fuel. The operator will be required to maintain monthly records that document operating hours and fuel deliveries.

- IV. **RECOMMENDATION:** This IC engine will comply with all applicable District rules and regulations. An Authority to Construct a diesel fired emergency standby engine generator should be issued to Verizon Wireless with the following conditions.

***Refer to conditions in Authority to Construct No. 25698***

REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_



# Attachment A

## PTE Calculation Sheet

# Standby IC Engine PTE Calculation

**A/C # 25698**

**Verizon Wireless - Citrus Heights**

**7551 Greenback Ln., Citrus Heights, CA 95610**

**Fuel: Diesel**

hours/day 24

hours/qtr 200

hours/year 200

**HP: 131**

	Emission Factor g/hp-hr	Basis	Potential to Emit		
			lb/day	lb/quarter	lb/year
VOC	1.14	AP-42	7.9	66	66
NOx	3.0	BACT	20.8	173	173
SOx	0.005	15 ppm S content	0.0	0	0
PM10	0.17	BACT Filterable plus Condensible	1.2	10	10
PM2.5	0.17	BACT Filterable plus Condensible	1.2	10	10
CO	3.7	BACT Standard	25.6	214	214
GHG	519	EPA GHG Rule	1.8 tons/day	15 tons/qtr	15 tons/yr

**Attachment B**  
**BACT Determination #172 and Generac's**  
**Statement of Exhaust Emissions 2018 FPT**  
**Diesel Fueled Generator (Doc No.**  
**100000028469)**

CATEGORY:

**IC ENGINE COMPRESSION-STANDBY**

BACT Size: Minor Source BACT

IC ENGINE STANDBY

<b>BACT Determination Number:</b>	172	<b>BACT Determination Date:</b>	4/10/2018
<b>Equipment Information</b>			
<b>Permit Number:</b> N/A -- Generic BACT Determination <b>Equipment Description:</b> IC ENGINE STANDBY <b>Unit Size/Rating/Capacity:</b> IC Engine, Standby, Diesel-fueled $\geq 50$ hp <b>Equipment Location:</b>			
<b>BACT Determination Information</b>			
<b>ROCs</b>	<b>Standard:</b>	Applicable NMHC + NOx emission standard	
	<b>Technology Description:</b>	Applicable NMHC + NOx emission standard for horsepower range based on Table 1: New Emergency Standby Diesel-Fueled CI Engines and Table 2: New Emergency Standby Direct-Drive Fire Pump Engines of the ATCM for Stationary CI Engines.	
	<b>Basis:</b>	Achieved in Practice	
<b>NOx</b>	<b>Standard:</b>	Applicable NMHC + NOx emission standard	
	<b>Technology Description:</b>	Applicable NMHC + NOx emission standard for horsepower range based on Table 1: New Emergency Standby Diesel-Fueled CI Engines and Table 2: New Emergency Standby Direct-Drive Fire Pump Engines of the ATCM for Stationary CI Engines.	
	<b>Basis:</b>	Achieved in Practice	
<b>SOx</b>	<b>Standard:</b>	CARB Diesel	
	<b>Technology Description:</b>	Diesel fuel with a sulfur content no greater than 0.0015% by weight.	
	<b>Basis:</b>	Achieved in Practice	
<b>PM10</b>	<b>Standard:</b>	Applicable PM emission standard	
	<b>Technology Description:</b>	Applicable PM emission standard for horsepower range based on Table 1: New Emergency Standby Diesel-Fueled CI Engines and Table 2: New Emergency Standby Direct-Drive Fire Pump Engines of the ATCM for Stationary CI Engines.	
	<b>Basis:</b>	Achieved in Practice	
<b>PM2.5</b>	<b>Standard:</b>	Applicable PM emission standard	
	<b>Technology Description:</b>	Applicable PM emission standard for horsepower range based on Table 1: New Emergency Standby Diesel-Fueled CI Engines and Table 2: New Emergency Standby Direct-Drive Fire Pump Engines of the ATCM for Stationary CI Engines.	
	<b>Basis:</b>	Achieved in Practice	
<b>CO</b>	<b>Standard:</b>	Applicable CO emission standard	
	<b>Technology Description:</b>	Applicable CO emission standard for horsepower range based on Table 1: New Emergency Standby Diesel-Fueled CI Engines and Table 2: New Emergency Standby Direct-Drive Fire Pump Engines of the ATCM for Stationary CI Engines.	
	<b>Basis:</b>	Achieved in Practice	
<b>LEAD</b>	<b>Standard:</b>	N/A	
	<b>Technology Description:</b>	N/A	
	<b>Basis:</b>		
<b>Comments:</b> For emergency engines $50 \leq \text{bhp} < 75$ , Tier 4 Interim certification is the requirement; for emergency engines $75 \leq \text{bhp} < 750$ , Tier 3 certification is the requirement; for emergency engines $\geq 750$ bhp, Tier 2 certification is the requirement.			
<b>District Contact:</b>			

# STATEMENT OF EXHAUST EMISSIONS

## 2018 FPT DIESEL FUELED GENERATOR

The measured emissions values provided here are proprietary to Generac and its authorized dealers. This information may only be disseminated upon request, to regulatory governmental bodies for emissions permitting purposes or to specifying organizations as submittal data when expressly required by project specifications, and shall remain confidential and not open to public viewing. This information is not intended for compilation or sales purposes and may not be used as such, nor may it be reproduced without the expressed written permission of Generac Power Systems, Inc. The data provided shall not be meant to include information made public by Generac.

Generator Model:	<b>SD080</b>	EPA Certificate Number:	<b>JFPXL06.7DGB-002</b>
kW <sub>e</sub> Rating:	<b>80</b>	CARB Certificate Number:	<b>Not Applicable</b>
Engine Family:	<b>JFPXL06.7DGB</b>	SCAQMD CEP Number:	<b>511714</b>
Engine Model:	<b>F4GE9485A*J</b>	Emission Standard Category:	<b>Tier 3</b>
Rated Engine Power (BHP)*:	<b>131</b>	Certification Type:	<b>Stationary Emergency CI</b>
Fuel Consumption (gal/hr)*:	<b>6.84</b>		<b>(40 CFR Part 60 Subpart IIII)</b>
Aspiration:	<b>Turbo/Aftercooled</b>		
Rated RPM:	<b>1800</b>		

\*Engine Power and Fuel Consumption are declared by the Engine Manufacturer of Record and the U.S. EPA.

**Emissions based on engine power of specific Engine Model.**  
**(These values are actual composite weighted exhaust emissions results over the EPA 5-mode test cycle.)**

CO	NOx + NMHC	PM	
<b>0.90</b>	<b>3.80</b>	<b>0.16</b>	Grams/kW-hr
<b>0.70</b>	<b>2.80</b>	<b>0.12</b>	Grams/bhp-hr

- The stated values are actual exhaust emission test measurements obtained from an engine representative of the type described above.
- Values based on 5mode testing are official data of record as submitted to regulatory agencies for certification purposes. Testing was conducted in accordance with prevailing EPA protocol, which is typically accepted by SCAQMD and other regional authorities.
- No emissions values provided above are to be construed as guarantees of emission levels for any given Generac generator unit.
- Generac Power Systems, Inc. reserves the right to revise this information without prior notice.
- Consult state and local regulatory agencies for specific permitting requirements.
- The emission performance data supplied by the equipment manufacturer is only one element required toward completion of the permitting and installation process. State and local regulations may vary on a case-by-case basis and local agencies must be consulted by the permit application/equipment owner prior to equipment purchase or installation. The data supplied herein by Generac Power Systems cannot be construed as a guarantee of installability of the generating set.

# Attachment C




## Health Risk Assessment



**A/C 25698**

Verizon Wireless  
7551 Greenback Ln.  
Citrus Heights, CA 95610

**Legend**

-  MEIR: 0.8 in a million cancer; 2.3E-04 HI chronic
-  MEIW/SCHOOL PMI: 2.2 in a million cancer; 1.7E-03 HI chronic
-  Source: Emergency Standby Diesel Fired 131 bhp Engine



Google Earth







```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.4.0
** Lakes Environmental Software Inc.
** Date: 6/21/2018
** File: L:\SSD FOLDERS\Modeling\25500-25999\25698\25698 All\25698 Aermod Input
File.inp
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE L:\SSD FOLDERS\Modeling\25500-25999\25698\25698 All\25698 All.isc
  MODELOPT DEFAULT CONC
  AVERTIME 1 PERIOD
  URBANOPT 1353923
  POLLUTID OTHER
  RUNORNOT RUN
  ERRORFIL "25698 All.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION S0001      POINT      649101.000  4282722.000      50.050
** DESCRSRC Emergency Diesel Engine 131 bhp
** Source Parameters **
  SRCPARAM S0001      1.0      2.743  748.150  80.92825      0.076

** Building Downwash **
  BUILDHGT S0001      3.66      3.66      3.66      3.66      3.66      0.00
  BUILDHGT S0001      0.00      0.00      0.00      0.00      0.00      0.00
  BUILDHGT S0001      3.66      3.66      3.66      3.66      3.66      3.66
  BUILDHGT S0001      3.66      3.66      3.66      3.66      3.66      0.00
  BUILDHGT S0001      0.00      0.00      0.00      0.00      0.00      0.00
  BUILDHGT S0001      3.66      3.66      3.66      3.66      3.66      3.66

  BUILDWID S0001      9.94      10.80      11.32      11.50      11.33      0.00
  BUILDWID S0001      0.00      0.00      0.00      0.00      0.00      0.00
  BUILDWID S0001      11.62      11.71      11.45      10.84      9.90      8.79
  BUILDWID S0001      9.94      10.80      11.32      11.50      11.33      0.00
  BUILDWID S0001      0.00      0.00      0.00      0.00      0.00      0.00
  BUILDWID S0001      11.62      11.71      11.45      10.84      9.90      8.79

  BUILDLEN S0001      9.28      10.39      11.17      11.62      11.71      0.00
  BUILDLEN S0001      0.00      0.00      0.00      0.00      0.00      0.00
  BUILDLEN S0001      11.50      11.33      10.82      9.98      8.83      7.90
  BUILDLEN S0001      9.28      10.39      11.17      11.62      11.71      0.00

```

BUILDLIN	S0001	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLIN	S0001	11.50	11.33	10.82	9.98	8.83	7.90
XBADJ	S0001	-13.22	-13.32	-13.02	-12.32	-11.24	0.00
XBADJ	S0001	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	S0001	0.24	1.37	2.45	3.46	4.37	4.82
XBADJ	S0001	3.94	2.94	1.84	0.70	-0.47	0.00
XBADJ	S0001	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	S0001	-11.74	-12.70	-13.27	-13.44	-13.20	-12.72
YBADJ	S0001	-1.93	-3.40	-4.77	-5.99	-7.03	0.00
YBADJ	S0001	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	S0001	-6.51	-5.38	-4.10	-2.69	-1.20	0.40
YBADJ	S0001	1.93	3.40	4.77	5.99	7.03	0.00
YBADJ	S0001	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	S0001	6.51	5.38	4.10	2.69	1.20	-0.40

URBANSRC ALL  
 SRCGROUP S0001 S0001  
 SRCGROUP ALL

SO FINISHED

\*\*

\*\*\*\*\*

\*\* AERMOD Receptor Pathway

\*\*\*\*\*

\*\*

\*\*

RE STARTING

INCLUDED "25698 All.rou"

RE FINISHED

\*\*

\*\*\*\*\*

\*\* AERMOD Meteorology Pathway

\*\*\*\*\*

\*\*

\*\*

ME STARTING

SURFFILE "D:\MET Data\Exec 10-14 N1MD.SFC"

PROFFILE "D:\MET Data\Exec 10-14 N1MD.PFL"

SURFDATA 23232 2010 SACRAMENTO/EXECUTIVE\_ARPT

UAIRDATA 23230 2010 OAKLAND/WSO\_AP

PROFBASE 4.6 METERS

ME FINISHED

\*\*

\*\*\*\*\*

\*\* AERMOD Output Pathway

\*\*\*\*\*

\*\*

\*\*

OU STARTING

RECTABLE ALLAVE 1ST

RECTABLE 1 1ST

\*\* Auto-Generated Plotfiles

PLOTFILE 1 ALL 1ST "L:\SSD FOLDERS\Modeling\25500-25999\25698\25698 All\25698

All.AD\01H1GALL.PLT" 31

PLOTFILE 1 S0001 1ST "L:\SSD FOLDERS\Modeling\25500-25999\25698\25698 All\25698

All.AD\01H1G001.PLT" 32

PLOTFILE PERIOD ALL "L:\SSD FOLDERS\Modeling\25500-25999\25698\25698 All\25698

All.AD\PE00GALL.PLT" 33

PLOTFILE PERIOD S0001 "L:\SSD FOLDERS\Modeling\25500-25999\25698\25698 All\25698  
All.AD\PE00G000.PLT" 34

SUMMFILE "L:\SSD FOLDERS\Modeling\25500-25999\25698\25698 All\25698 All.sum"

OU FINISHED

\*\*

\*\*\*\*\*

\*\* Project Parameters

\*\*\*\*\*

\*\* PROJCTN CoordinateSystemUTM

\*\* DESCPTN UTM: Universal Transverse Mercator

\*\* DATUM North American Datum 1983

\*\* DTMRGN CONUS

\*\* UNITS m

\*\* ZONE 10

\*\* ZONEINX 0

\*\*

\*\*\*PROJECT INFORMATION\*\*\*

HARP Version: 17023  
 Project Name: 25698ALL  
 Project Output Directory: L:\SSD FOLDERS\Modeling\25500-25999\25698 ALL\25698ALL  
 HARP Database: NA

\*\*\*FACILITY INFORMATION\*\*\*

Origin  
 X (m):0  
 Y (m):0  
 Zone:1  
 No. of Sources:0  
 No. of Buildings:0

\*\*\*EMISSION INVENTORY\*\*\*

No. of Pollutants:1  
 No. of Background Pollutants:0

Emissions Scrid	StkID	ProID	PolID	PolAbbrev	Multi	Annual Ems (lbs/yr)	MaxHr Ems (lbs/hr)	MWAF
S0001	0	0	9901	DieseExhPM	1	2.2	0.04	1

Background  
 PolID PolAbbrev Conc (ug/m<sup>3</sup>) MWAF

Ground level concentration files (\glc\)

9901MAXHR.txt  
 9901PER.txt

\*\*\*POLLUTANT HEALTH INFORMATION\*\*\*

Health Database: C:\HARP2\Tables\HEALTH1.mdb  
 Health Table Version: HEALTH17052  
 Official: True

PolID	PolAbbrev	InhCancer	OralCancer	AcuteREL	InhChronicREL	OralChronicREL	InhChronicSHREL
9901	DieseExhPM	1.1					

\*\*\*AIR DISPERSION MODELING INFORMATION\*\*\*

All executables were obtained from USEPA's Support Center for Regulatory Atmospheric Modeling website (<http://www.epa.gov/scram001/>)  
 AERMOD: 15181  
 AERMAP: 11103  
 BPIPRM: 04274  
 AERFLOT: 13329

\*\*\*METEOROLOGICAL INFORMATION\*\*\*

Version:  
 Surface File:  
 Profile File:  
 Surface Station:  
 Upper Station:  
 On-Site Station:

\*\*\*LIST OF AIR DISPERSION FILES\*\*\*

AERMOD Input File:

AERMOD Output File:

AERMOD Error File:

Plotfile list

\*\*\*LIST OF RISK ASSESSMENT FILES\*\*\*

Health risk analysis files (\hra\)

25698AllResCancerRisk.csv  
25698AllResCancerRiskSumByRec.csv  
25698AllResGLCList.csv  
25698AllResHRAInput.hra  
25698AllResNCacuteRisk.csv  
25698AllResNCacuteRiskSumByRec.csv  
25698AllResNCchronicRisk.csv  
25698AllResNCchronicRiskSumByRec.csv  
25698AllResOutput.txt  
25698AllResPathwayRec.csv  
25698AllResPolDB.csv  
25698AllWkrCancerRisk.csv  
25698AllWkrCancerRiskSumByRec.csv  
25698AllWkrGLCList.csv  
25698AllWkrHRAInput.hra  
25698AllWkrNCacuteRisk.csv  
25698AllWkrNCacuteRiskSumByRec.csv  
25698AllWkrNCchronicRisk.csv  
25698AllWkrNCchronicRiskSumByRec.csv  
25698AllWkrOutput.txt  
25698AllWkrPathwayRec.csv  
25698AllWkrPolDB.csv

Spatial averaging files (\sa\)

HARP2 - HRACalc (dated 17023) 6/20/2018 2:11:29 PM - Output Log

GLCs loaded successfully  
Pollutants loaded successfully  
Pathway receptors loaded successfully

\*\*\*\*\*

#### RISK SCENARIO SETTINGS

Receptor Type: Resident  
Scenario: All  
Calculation Method: Derived

\*\*\*\*\*

#### EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25  
Total Exposure Duration: 30

#### Exposure Duration Bin Distribution

3rd Trimester Bin: 0.25

0<2 Years Bin: 2

2<9 Years Bin: 0

2<16 Years Bin: 14

16<30 Years Bin: 14

16 to 70 Years Bin: 0

\*\*\*\*\*

#### PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True  
Soil: True  
Dermal: True  
Mother's milk: True  
Water: False  
Fish: False  
Homegrown crops: False  
Beef: False  
Dairy: False  
Pig: False  
Chicken: False  
Egg: False

\*\*\*\*\*

#### INHALATION

HRA25698 HARP Res Output

Daily breathing rate: RMP

**\*\*Worker Adjustment Factors\*\***

Worker adjustment factors enabled: NO

**\*\*Fraction at time at home\*\***

3rd Trimester to 16 years: OFF

16 years to 70 years: ON

\*\*\*\*\*

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02

Soil mixing depth (m): 0.01

Dermal climate: Mixed

\*\*\*\*\*

TIER 2 SETTINGS

Tier2 not used.

\*\*\*\*\*

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698 All\25698ALL\hra\25698AllResCancerRisk.csv

Cancer risk total by receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698

All\25698ALL\hra\25698AllResCancerRiskSumByRec.csv

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698

All\25698ALL\hra\25698AllResNCChronicRisk.csv

Chronic risk total by receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698

All\25698ALL\hra\25698AllResNCChronicRiskSumByRec.csv

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698 All\25698ALL\hra\25698AllResNCACuteRisk.csv

Acute risk total by receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698

All\25698ALL\hra\25698AllResNCACuteRiskSumByRec.csv

HRA ran successfully

HARP2 - HRACalc (dated 17023) 6/20/2018 2:15:10 PM - Output Log

GLCs loaded successfully  
Pollutants loaded successfully  
Pathway receptors loaded successfully

\*\*\*\*\*

RISK SCENARIO SETTINGS

Receptor Type: Worker

Scenario: All

Calculation Method: Derived

\*\*\*\*\*

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 16

Total Exposure Duration: 25

Exposure Duration Bin Distribution

3rd Trimester Bin: 0

0<2 Years Bin: 0

2<9 Years Bin: 0

2<16 Years Bin: 0

16<30 Years Bin: 0

16 to 70 Years Bin: 25

\*\*\*\*\*

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True

Soil: True

Dermal: True

Mother's milk: False

Water: False

Fish: False

Homegrown crops: False

Beef: False

Dairy: False

Pig: False

Chicken: False

Egg: False

\*\*\*\*\*

INHALATION



HRA25698 HARP Wkr Output

Daily breathing rate: Moderate8HR

**\*\*Worker Adjustment Factors\*\***

NOTE: The worker adjustment factors below are only used for cancer assessments. However, the GLC adjustment factor is also applied to 8-hr noncancer chronic assessments.

Worker adjustments factors enabled: YES

GLC adjustment factor: 4.2

Exposure frequency: 250

**\*\*Fraction at time at home\*\***

3rd Trimester to 16 years: OFF

16 years to 70 years: OFF

\*\*\*\*\*

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02

Soil mixing depth (m): 0.01

Dermal climate: Mixed

\*\*\*\*\*

TIER 2 SETTINGS

Tier2 not used.

\*\*\*\*\*

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698 All\25698ALL\hra\25698AllWkrCancerRisk.csv

Cancer risk total by receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698

All\25698ALL\hra\25698AllWkrCancerRiskSumByRec.csv

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698

All\25698ALL\hra\25698AllWkrNCChronicRisk.csv

Chronic risk total by receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698

All\25698ALL\hra\25698AllWkrNCChronicRiskSumByRec.csv

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698 All\25698ALL\hra\25698AllWkrNCAcuteRisk.csv

Acute risk total by receptor saved to: L:\SSD

FOLDERS\Modeling\25500-25999\25698\25698

All\25698ALL\hra\25698AllWkrNCAcuteRiskSumByRec.csv

HRA ran successfully

# Attachment D

## CEQA Notice of Exemption

## Notice of Exemption

## Appendix E

To: Office of Planning and Research  
P.O. Box 3044, Room 113  
Sacramento, CA 95812-3044

County Clerk

County of: Sacramento

600 8th Street

Sacramento, CA 95814

From: (Public Agency): Sacramento Metropolitan AQMD  
777 12th Street, Suite 300  
Sacramento, CA 95814

(Address)

Project Title: Emergency Standby Engine Operation (A/C 25698)

Project Applicant: Verizon Wireless, 295 Parkshore Dr., Folsom, CA 95630

Project Location - Specific:

7551 Greenback Ln., Citrus Heights, CA 95610

Project Location - City: Citrus Heights

Project Location - County: Sacramento

Description of Nature, Purpose and Beneficiaries of Project:

The project beneficiary, Verizon Wireless, is replacing their existing emergency standby generator set with a new one. The engine will be driving a generator and used during times when there is loss of power.

Name of Public Agency Approving Project: Sacramento Air Quality Management District

Name of Person or Agency Carrying Out Project: Verizon Wireless

Exempt Status: **(check one):**

- ☒ Ministerial (Sec. 21080(b)(1); 15268);  
☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));  
☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));  
☐ Categorical Exemption. State type and section number: \_\_\_\_\_  
☒ Statutory Exemptions. State code number: Sec. 1506(b)(3)

Reasons why project is exempt:

SMAQMD determined there is no possibility that the project will have a significant adverse impact on the environment because its air pollutant emissions are within the Districts' acceptable limits and no other environmental medium is expected to be adversely affected. Also, this permitting action is covered under an existing BACT, therefore it is considered ministerial.

Lead Agency

Contact Person: Jorge DeGuzman

Area Code/Telephone/Extension: 916-874-4860

**If filed by applicant:**

1. Attach certified document of exemption finding.  
 2. Has a Notice of Exemption been filed by the public agency approving the project? ☐ Yes ☐ No

Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Title: Program Manager

☒ Signed by Lead Agency ☐ Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.  
 Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR: \_\_\_\_\_