

AIR QUALITY

MANAGEMENT DISTRICT

AUTHORITY TO CONSTRUCT EVALUATION

APPLICATION NO.: A/C 25495
REVIEW STARTING DATE: 11/16/17
ISSUING ENGINEER: Joe Carle

I. PROJECT DESCRIPTION:

FACILITY NAME: PENSKE LOGISTICS LLC.

LOCATION: 4040 Vista Park Ct., Sacramento, CA 95834

PROPOSAL: Authority to Construct and Permit to Operate a diesel-fired emergency standby generator.

INTRODUCTION: PENSKE LOGISTICS LLC. is a private company that operates a distribution warehouse for Starbucks. PENSKE LOGISTICS LLC. is seeking an Authority to Construct and a Permit to Operate a diesel fired emergency standby generator which will be installed at their warehouse located at 4040 Vista Park Ct., Sacramento.

EQUIPMENT DESCRIPTION: Emergency standby engine.

Make: Cummins
 Model: QSX15-G9
 Serial No.: TBD
 Engine Hp: 755 bhp
 Fuel Type: Diesel
 Displacement: 912 in³
 Engine Family: HCEXL015.AAJ
 Model Year: 2017

PROCESS RATE/FUEL USAGE:

Equipment	Diesel Fuel Usage		
	Gallons/Hour (A)	Gallons/Day	Gallons/Quarter
Engine – QSX15-G9 - 755 HP	30.1	722.4	6,020

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

OPERATING SCHEDULE: This application is for a stand-by 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 2 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/qtr
NOx	0 lb/day	0 lb/qtr
SOx	0 lb/day	0 lb/qtr
PM10	0 lb/day	0 lb/qtr
PM2.5	0 lb/day	0 lb/qtr
CO	0 lb/day	0 lb/qtr

2. PROPOSED POTENTIAL TO EMIT: This application is for a stand-by 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/qtr, lb/yr)

EF = Emission Factor (g/hp-hr)

HP = Horse Power of engine

Hrs = Maximum hours of operation (hrs/day, hrs/qtr, hrs/yr)

U_{CF} = 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)	0.32	12.8	107	107
NOx (C)	4.8	191.7	1,598	1,598
SOx	0.005	0.2	2	2
PM10	0.17	6.8	57	57
PM2.5	0.17	6.8	57	57
CO	2.6	103.9	866	866
GHG	519	10.4 tons/day	86 tons/qtr	86 tons/year
Lead	N/A	N/A	N/A	N/A

- (A) Emission factors for VOC, NOx, and PM are based on the District's BACT standards (Tier 2 standard). CO emission factor is based on the certified level for a Tier 2 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 PM certification 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 3.4-1 (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 755 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 0.32 g/bhp-hr and NOx emissions are assessed at the worst case limit of 4.8 g/bhp-hr.

III. COMPLIANCE WITH RULES AND REGULATIONS:

1. **H&S § 42301.6 (AB 3205) COMPLIANCE:** The engine will be located within 1,000 feet of Natomas Charter School a private K-12 school. There are no other K-12 schools within ¼ mile radius of the source. Natomas Charter School is located at 1172 W. National Drive, Suite 30. A public notice will be distributed to the parents or guardians of the children that attend the school and all residents within 1000 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
	PM ₁₀	0 lb/day
	PM _{2.5}	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	12.8	0	13	>0	Yes
NOx	191.7	0	192	>0	Yes
SOx	0.2	0	0	>0	No
PM10	6.8	0	7	>0	Yes
PM2.5	6.8	0	7	>0	Yes
CO	103.9	0	104	>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. **116**) was last reviewed on **02/11/16**. 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:

BACT Compliance		
Pollutant	District BACT Standard BACT No. 116 (g/hp-hr)	Manufacturer's Emissions Data (A) (g/hp-hr)
VOC + NOx(C)	4.8	3.9
SOx	0.005 Fuel with < 0.0015% sulfur content by weight	Not applicable, This engine does not trigger BACT
PM10 (B)	0.15	0.08
PM2.5 (B)	0.15	0.08
CO	2.6	Not applicable, This engine does not trigger BACT

- (A) Based on Cummins Exhaust Emission Data Sheet: epa-1025q. 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 Cummins QSX15-G9 diesel engine for VOC, NOx, SOx, PM10, and PM2.5 demonstrate compliance with the BACT standards (Attachment B). The permit will require that the owner/operator only use fuel that contains less than 0.0015% sulfur by weight (CARB Diesel Fuel), which meets the BACT standard for SOx.

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_x (SAME FOR ALL 4 QUARTERS)

Permit No.	Emissions Unit	Stationary Source Potential to Emit lb/quarter	
		VOC	NO _x
A/C 25495	IC Engine Standby (755 BHP)	107	1,598
Total		107	1,598
Offset Trigger Level		≥5,000	≥5,000

STATIONARY SOURCE POTENTIAL TO EMIT FOR SO_x, PM₁₀, PM_{2.5}, 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 _{2.5}	SO _x	PM ₁₀	CO
A/C 25495	IC Engine Standby (755 BHP)	0.029	2	57	866
Total		0.029	2	57	866
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?
NO _x (ozone precursor)	65 lb/day	8.0 lb/day	8 lb/day	Yes
VOC (ozone precursor)	65 lb/day	0.5 lb/day	1 lb/day	Yes

Pollutant/Hazard		Threshold	Project Total (D)	Rounded Project Total (B)	Less than Standard?
PM10 (A)	Daily	82 lb/day	0.3 lb/day	0 lb/day	Yes
	Annual	15 tons/year	0.007 tons/year	0 tons/year	Yes
PM2.5 (A)	Daily	80 lb/day	0.3 lb/day	0 lb/day	Yes
	Annual	14.6 tons/year	0.007 tons/year	0 tons/year	Yes
Cancer Risk (per million)		10	2.5 (C)	3 (C)	Yes
Acute Non-Cancer Health Hazard		1.0	N/A (C)	N/A (C)	N/A
Chronic Non-Cancer Health Hazard		1.0	1.9E-3 (C)	0 (C)	Yes
GHG as CO2e	Operational Phase	10,000 metric tons/year	78 metric tons/year	78 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. Typical daily maintenance hours on emergency engines are one hour/day.

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 the District’s BACT Clearinghouse (No. 116), 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/Yr)
CO	100
NOx	40
SOx	40
PM	25
PM10	15
PM2.5	10 (PM2.5) or 40 (SO2) or 40(NO)
Ozone	40 of NOx or VOCs
Lead	0.6
Fluorides	3
Sulfuric acid mist	7
H ₂ S	10
Total reduced sulfur (including H ₂ S)	10
Reduced sulfur compounds (including H ₂ S)	10
Greenhouse Gases (CO ₂ 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/qtr
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.

Increase in Potential to Emit					
Pollutant	Potential to Emit for the Project		Increase in PTE	Notification Threshold	Notification Required?
	Pre-Application	Post-Application			
VOC	0	107 lb/qtr	107 lb/qtr	≥ 5,000	No
NOx	0	1,598 lb/qtr	1,598 lb/qtr	≥ 5,000	No
SOx	0	2 lb/qtr	2 lb/qtr	≥ 9,200	No
PM10	0	57 lb/qtr	57 lb/qtr	≥ 7,300	No
PM2.5	0	0.03 TPY	0 TPY	≥ 10 TPY	No
CO	0	866 lb/qtr	866 lb/qtr	≥ 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 ^(A)		Project HRA Results ^(B)		
	T-BACT	Maximum	Residential	Worker	School
Cancer Risk (Chances per Million)	≥ 1.0	10.0	0.1	2.5	1.1

Health Risk Action Levels and Assessment Summary					
Type of Health Risk	Permitting Thresholds ^(A)		Project HRA Results ^(B)		
	T-BACT	Maximum	Residential	Worker	School
Acute Non-Cancer (Hazard Index)	≥ 1.0	1.0	NA	NA	NA
Chronic Non-Cancer (Hazard Index)	≥ 1.0	1.0	3.8E-05	1.9E-03	8.1E-04

(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 8.8.9. The following parameters were used as inputs to the model for each engine:

Release Height:	9 feet
Gas Exit Temperature:	865 °F
Stack Diameter:	8 in.
Gas Exit Flow Rate:	3105 acfm
Nominal Emission Rate:	1.0 g/s

SMAQMD utilizes the California Air Resources Board's Hotspots Analysis and Reporting Program (HARP2), Version 16088 model which incorporates the health risk assessment methodologies from the "Risk Assessment Guidelines - Guidance Manual for Preparation of Health Risk Assessments" (February 2015). See Attachment C for the full health risk assessment.

CANCER RISK ASSESSMENT:

From equation 5.4.1.1 and 8.2.4 A:

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

Where:

Riskair	= Cancer risk from inhalation exposure
Cair	= Concentration (µg/m ³)
(BR/BW)	= Breathing Rate/Body Weight
	= 361 (l/kg-day) 95%, 3 rd 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
	= 245 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 rd 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)	= (mg/1000 ug)*(m ³ /1000 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 25495	Residential (Located at Receptor #1902, UTM: 632382, 4277328)	Diesel Exhaust	0.1
	Non-Residential (Located at Receptor #935, UTM: 631841, 4277328)	Diesel Exhaust	2.5
	School (Located at Receptor #1664, UTM: 631780, 4278387)	Diesel Exhaust	1.1

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 (ug/m³) 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 (ug/m³) 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. 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	3.78E-05	X

Toxic Air Pollutant	Target Organ Affects – Acute HI (Non-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 (Non-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	1.92E-03	X

Toxic Air Pollutant	Target Organ Affects – Acute HI (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 (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	8.12E-04	X

NON-CANCER RISK SUMMARY:

Permit No.	Receptor (Worst Case)	TAC	Hazard Index
A/C 25495	Residential (Located at Receptor #1902, UTM: 632382, 4277328)	Diesel Exhaust	3.78E-05
	Non-Residential (Located at Receptor #935, UTM: 631841, 4278295)	Diesel Exhaust	1.92E-03
	School (Located at Receptor #1664, UTM: 631780, 4278387)	Diesel Exhaust	8.12E-04

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 0.1 in one million, which is below the significant risk threshold.
- The evaluated cancer risk for a maximum exposed individual worker (MEIW) is 2.5 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 a Tier 2 engine 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) and the maximum exposed individual worker (MEIW).

- The evaluated noncancer Chronic Hazard Index is less than one for the maximum exposed individual resident (MEIR) and the maximum exposed individual worker (MEIW).

Rule 406 - Specific Contaminants

The proposed equipment is not expected to exceed the emissions limit of 0.2% by volume sulfur compound as SO₂ and 0.1 gr/dscf for combustion contaminants calculated to 12% CO₂.

Diesel Fuel F-Factor	=	9190 dscf/mmBTU
Molar Volume	=	385.3 ft ³ /mol
Diesel HHV	=	19,300 BTU/lb
Conversion Factor	=	15.432 gr/g
PM10 Emission Factor	=	0.17 g/hp-hr
SO ₂ 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 ₂ Conversion Efficiency	=	0.99

PM10 Concentration (combustion contaminants):

- 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
- Calculate CO₂ emission factor (lb CO₂/mmbtu) assuming 100% C to CO₂ conversion
= (0.87 lb C/lb fuel) x (mol C/12 lb C) x (mol CO₂/mol C) x (44 lb CO₂/mol CO₂) x (lb fuel/19300 BTU) x (1E6 BTU/mmBTU)
= 165.2849741 lb CO₂/mmBTU
- Calculate lb CO₂/mmBTU at 99% Conversion
= 165.2849741 lb CO₂/mmBTU x 99%
= 163.6321244 lb CO₂/mmBTU
- Calculate volume % of CO₂ in Exhaust Gas
= % CO₂
= mol CO₂/mol exhaust
= (163.6321244 lb CO₂/mmBTU) x (mol CO₂/44 lb CO₂) x (mmBTU/9190 dscf) x (385.3 dscf/mol exhaust)
= 0.155919125 mol CO₂/mol exhaust or 15.5919125 % CO₂
- Calculate corrected grain loading
= (0.04078097 gr/dscf) x (12% CO₂/15.5919125% CO₂)
= 0.031 gr/dscf corrected to 12% CO₂

OR

Simplified Equation

$$= (0.17 \text{ g/hp-hr}) \times (15.432 \text{ gr/g}) \times (\text{hp-hr}/7000 \text{ BTU}) \times (0.12 \text{ mol CO}_2/\text{mol exhaust}) \times (\text{lb fuel}/0.87 \text{ lb C}) \times (12 \text{ lb C/mol C}) \times (\text{mol C/mol CO}_2) \times (19300 \text{ BTU/lb fuel}) / (0.99) \times (\text{mol exhaust}/385.3 \text{ dscf})$$

$$= 0.031 \text{ gr/dscf corrected to 12\% CO}_2$$

SO₂ Concentration (% SO₂ by volume):

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

$$= (0.005 \text{ g/hp-hr}) \times (\text{lb SO}_2/453.6 \text{ g}) \times (\text{hp-hr}/7000 \text{ BTU}) \times (1\text{E}6 \text{ BTU/mmBTU}) \times (\text{mmBTU}/9190 \text{ dscf}) \times (\text{mol SO}_2/64 \text{ lb SO}_2) \times (385.3 \text{ dscf/mol exhaust})$$

= 0.000001032 mol SO₂/mol exhaust or 0.0001032 % SO₂

The rule emission limits for SO₂ and PM are 0.2% SO₂ by volume and 0.1 grains/cf at 12% CO₂, 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/r9nsps.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 2017 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 2 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/r9nsps.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/r9nsps.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.

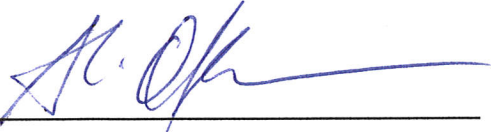
6. **ATCM COMPLIANCE:** The list of all adopted Airborne Toxic Control Measures (<http://www.arb.ca.gov/toxics/atcm/atcm.htm>) was reviewed to determine if the proposed project is subject to one or more of these regulations.

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 2 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 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 PENSKE LOGISTICS LLC. with the following conditions.

Refer to conditions in Authority to Construct No. 25495

REVIEWED BY:  DATE: 12-4-17

APPROVED BY:  DATE: 12-5-17

Attachment A

Potential to Emit Calculations

Standby IC Engine PTE Calculation

A/C # 25495

PENSKE LOGISTICS LLC.

4040 Vista Park Ct., Sacramento, CA 95834

Fuel: Diesel

hours/day 24

hours/qtr 200

hours/year 200

HP: 755

	Emission Factor g/hp-hr	Basis	Potential to Emit		
			lb/day	lb/quarter	lb/year
VOC	0.32	AP-42	12.8	107	107
NOx	4.8	BACT NOx + VOC (Tier 2)	191.7	1598	1598
SOx	0.005	15 ppm S content	0.2	2	2
PM10	0.17	BACT Filterable and Condensable	6.8	57	57
PM2.5	0.17	BACT Filterable and Condensable	6.8	57	57
CO	2.6	Tier 2 Standard	103.9	866	866
GHG	519	EPA GHG Rule	10.4 tons/day	86 tons/qtr	86 tons/yr

Attachment B
BACT Determination #116 and Cummins Exhaust
Emissions Data Sheet: epa-1025q

CATEGORY:

IC ENGINE COMPRESSION-STANDBY

BACT Size: Minor Source BACT

IC ENGINE STANDBY

BACT Determination Number: 116	BACT Determination Date: 2/11/2016
---------------------------------------	---

Equipment Information

Permit Number: 24758
Equipment Description: IC ENGINE STANDBY
Unit Size/Rating/Capacity: I.C. Engine, Standby, Diesel-fueled >=50 HP
Equipment Location: PHILLIPS 66 COMPANY
 76 BROADWAY
 SACRAMENTO, CA

BACT Determination Information

ROCs	Standard:	Applicable NMHC + NOx Tier Standard
	Technology Description:	Applicable NMHC + NOx emission standard for horsepower range based on the ATCM for Stationary CI Engines
	Basis:	Achieved in Practice
NOx	Standard:	Applicable NMHC + NOx Tier Standard
	Technology Description:	Applicable NMHC + NOx emission standard for horsepower range based on the ATCM for Stationary CI Engines
	Basis:	Achieved in Practice
SOx	Standard:	CARB Diesel
	Technology Description:	Diesel fuel with a sulfur content no greater than 0.0015% by weight
	Basis:	Achieved in Practice
PM10	Standard:	Applicable PM Tier Standard
	Technology Description:	Applicable PM emission standard for horsepower range based on the ATCM for Stationary CI Engines
	Basis:	Achieved in Practice
PM2.5	Standard:	Applicable PM Tier Standard
	Technology Description:	Applicable PM emission standard for horsepower range based on the ATCM for Stationary CI Engines
	Basis:	Achieved in Practice
CO	Standard:	Applicable CO Tier Standard
	Technology Description:	Applicable CO emission standard for horsepower range based the ATCM for Stationary CI Engines
	Basis:	Achieved in Practice
LEAD	Standard:	
	Technology Description:	
	Basis:	

Comments: 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 ≥ 750 bhp, Tier 2 certification is the requirement.

District Contact: Isam Boulad Phone No.: (916) 874 - 4859 email: iboulad@airquality.org



Compliance Information:

The engine used in this generator set complies with Tier 2 emissions limit of U.S. EPA New Source Performance Standards for stationary emergency engines under the provisions of 40 CFR 60 Subpart IIII when tested per ISO8178 D2.

Engine Manufacturer:	Cummins Inc
EPA Certificate Number:	HCEXL015.AAJ-034
Effective Date:	11/21/2016
Date Issued:	11/21/2016
EPA Engine Family (Cummins Emissions Family):	HCEXL015.AAJ (J103)

Engine Information:

Model:	QSX / QSX15 / QSX15-G / QSX15-G9	Bore:	5.39 in. (137 mm)
Engine Nameplate HP:	755	Stroke:	6.65 in. (169 mm)
Type:	4 Cycle, In-line, 6 Cylinder Diesel	Displacement:	912 cu. in. (15 liters)
Aspiration:	Turbocharged and CAC	Compression Ratio:	17.0:1
Emission Control Device:	Electronic Control	Exhaust Stack Diameter:	8 in.

Diesel Fuel Emission Limits

D2 Cycle Exhaust Emissions

	Grams per BHP-hr			Grams per kWm-hr		
	<u>NOx + NMHC</u>	<u>CO</u>	<u>PM</u>	<u>NOx + NMHC</u>	<u>CO</u>	<u>PM</u>
Test Results - Diesel Fuel (300-4000 ppm Sulfur)	4.3	0.4	0.10	5.7	0.6	0.13
EPA Emissions Limit	4.8	2.6	0.15	6.4	3.5	0.20
Test Results - CARB Diesel Fuel (<15 ppm Sulfur)	3.9	0.4	0.08	5.2	0.6	0.11
CARB Emissions Limit	4.8	2.6	0.15	6.4	3.5	0.20

The CARB emission values are based on CARB approved calculations for converting EPA (500 ppm) fuel to CARB (15 ppm) fuel.

Test Methods: EPA/CARB Nonroad emissions recorded per 40CFR89 (ref. ISO8178-1) and weighted at load points prescribed in Subpart E, Appendix A for Constant Speed Engines (ref. ISO8178-4, D2)

Diesel Fuel Specifications: Cetane Number: 40-48. Reference: ASTM D975 No. 2-D.

Reference Conditions: Air Inlet Temperature: 25°C (77°F), Fuel Inlet Temperature: 40°C (104°F). Barometric Pressure: 100 kPa (29.53 in Hg), Humidity: 10.7 g/kg (75 grains H2O/lb) of dry air; required for NOx correction, Restrictions: Intake Restriction set to a maximum allowable limit for clean filter; Exhaust Back Pressure set to a maximum allowable limit.

Tests conducted using alternate test methods, instrumentation, fuel or reference conditions can yield different results.

Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

Attachment C
Health Risk Assessment

HRA for A/C 25495



Legend

- R** MEIR: 0.14 in a million Cancer; HI 3.8E-05 Chronic
- W** MEIW: 2.5 in a million Cancer; HI 1.9E-03 Chronic
- S** School PMI: 1.1 in a million Cancer; HI 8.1E-04 Chronic
- Source: Standby CI Engine 755 HP



Google Earth

1000 ft



PMI, MEIR, and MEIW Report
Penske Logistics LLC
A/C 25495 - IC ENGINE, STANDBY, STATIONARY

MAXIMALLY EXPOSED INDIVIDUAL RESIDENT (MEIR)

POL	POLABBREV	InhalationCancerURF	InhalationCancerSlopeFactor	OralCancerSlopeFactor	AcuteREL	InhalationChronicREL	OralChronicREL
9901	DieselExhPM	0.0003	1.1	#N/A	#N/A	5	#N/A

REC	X	Y	POLID	CONC	INH	SOIL	DERMAL	MMILK	WATER	FISH	CROP	BEEF	DAIRY	PIG	CHICKEN	EGG	HAZARD INDEX BY TARGET ORGAN	DRIVER	RISK TOTAL		
1902	632381.64	4277327.59	9901	0.000189	1.41E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1ST DRIVER	2ND DRIVER	3RD DRIVER	1.41E-07
																		DRIVER	GENERAL		

CANCER RISK - SCENARIO: 30YrCancerDerived

*HARP - HRAcGc v17023 11/22/2017 3:43:40 PM - Cancer Risk - Input File: L:\SSD FOLDERS\Modeling\25000-25499\25495 All Rec\25495All\hra\25495All\res\hrAInput.hra

NONCANCER HAZARD INDEX - SCENARIO: NonCancerAcute

*HARP - HRAcGc v17023 11/22/2017 3:43:40 PM - Acute Risk - Input File: L:\SSD FOLDERS\Modeling\25000-25499\25495 All Rec\25495All\hra\25495All\res\hrAInput.hra

REC	X	Y	POLID	CONC	CV	CNS	IMMUN	KIDNEY	GLV	REPRO/DEVEI	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	DRIVER	RISK TOTAL		
1902	632381.64	4277327.59	9901	0.7828661	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1ST DRIVER	2ND DRIVER	3RD DRIVER	
																		DRIVER	GENERAL		

NONCANCER HAZARD INDEX - SCENARIO: NonCancerChronicDerived

*HARP - HRAcGc v17023 11/22/2017 3:43:40 PM - Chronic Risk - Input File: L:\SSD FOLDERS\Modeling\25000-25499\25495 All Rec\25495All\hra\25495All\res\hrAInput.hra

REC	X	Y	POLID	CONC	INH	SOIL	DERMAL	MMILK	WATER	FISH	CROP	BEEF	DAIRY	PIG	CHICKEN	EGG	HAZARD INDEX BY TARGET ORGAN	DRIVER	RISK TOTAL		
1902	632381.64	4277327.59	9901	0.000189	1.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1ST DRIVER	2ND DRIVER	3RD DRIVER	2.50E-06
																		DRIVER	GENERAL		

MAXIMALLY EXPOSED INDIVIDUAL WORKER (MEIW) / POINT OF MAXIMUM IMPACT (PMI)

REC	X	Y	POLID	CONC	INH	SOIL	DERMAL	MMILK	WATER	FISH	CROP	BEEF	DAIRY	PIG	CHICKEN	EGG	HAZARD INDEX BY TARGET ORGAN	DRIVER	RISK TOTAL		
935	631841.09	4278294.81	9901	0.00960144	2.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1ST DRIVER	2ND DRIVER	3RD DRIVER	2.50E-06
																		DRIVER	GENERAL		

CANCER RISK - SCENARIO: 25YrCancerDerived

*HARP - HRAcGc v17023 11/22/2017 3:44:33 PM - Cancer Risk - Input File: L:\SSD FOLDERS\Modeling\25000-25499\25495 All Rec\25495All\hra\25495All\res\hrAInput.hra

REC	X	Y	POLID	CONC	CV	CNS	IMMUN	KIDNEY	GLV	REPRO/DEVEI	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	DRIVER	RISK TOTAL		
935	631841.09	4278294.81	9901	9.7430899	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1ST DRIVER	2ND DRIVER	3RD DRIVER	
																		DRIVER	GENERAL		

NONCANCER HAZARD INDEX - SCENARIO: NonCancerChronicDerived

*HARP - HRAcGc v17023 11/22/2017 3:44:33 PM - Chronic Risk - Input File: L:\SSD FOLDERS\Modeling\25000-25499\25495 All Rec\25495All\hra\25495All\res\hrAInput.hra

REC	X	Y	POLID	CONC	INH	SOIL	DERMAL	MMILK	WATER	FISH	CROP	BEEF	DAIRY	PIG	CHICKEN	EGG	HAZARD INDEX BY TARGET ORGAN	DRIVER	RISK TOTAL		
935	631841.09	4278294.81	9901	0.00960144	9.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1ST DRIVER	2ND DRIVER	3RD DRIVER	
																		DRIVER	GENERAL		


```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.4.0
** Lakes Environmental Software Inc.
** Date: 11/22/2017
** File: L:\SSD FOLDERS\Permitting\1 - Permits\25000 - 25499\25495\HRA25495 AERMOD
input report.inp
**

```

```
*****
```

```

**
**
*****

```

```

** AERMOD Control Pathway
*****

```

```

**
**
CO STARTING
  TITLEONE L:\SSD FOLDERS\Modeling\25000-25499\25495\25495 All Rec\25495 All Re
  MODELOPT DFAULT CONC
  AVERTIME 1 PERIOD
  URBANOPT 1353923
  POLLUTID SO2
  RUNORNOT RUN
  ERRORFIL "25495 All Rec.err"

```

```

CO FINISHED
**
*****

```

```

** AERMOD Source Pathway
*****

```

```

**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION S0001      POINT      631861.000  4278235.000      4.290
** DESCRSRC Standby Compression Ignition Engine 755 HP
** Source Parameters **
  SRCPARAM S0001      1.0      2.743      735.928      44.73891      0.204

```

```

** Building Downwash **
  BUILDHGT S0001      10.67      10.67      10.67      10.67      10.67      10.67
  BUILDHGT S0001      10.67      10.67      10.67      10.67      10.67      10.67
  BUILDHGT S0001      10.67      10.67      10.67      10.67      10.67      10.67
  BUILDHGT S0001      10.67      10.67      10.67      10.67      10.67      10.67
  BUILDHGT S0001      10.67      10.67      10.67      10.67      10.67      10.67
  BUILDHGT S0001      10.67      10.67      10.67      10.67      10.67      10.67

  BUILDWID S0001      211.72      214.13      210.04      199.56      183.02      160.92
  BUILDWID S0001      133.93      102.87      70.30      104.29      135.12      161.84
  BUILDWID S0001      183.64      199.86      210.01      213.78      211.05      202.87
  BUILDWID S0001      211.72      214.13      210.04      199.56      183.02      160.92
  BUILDWID S0001      133.93      102.87      70.30      104.29      135.12      161.84
  BUILDWID S0001      183.64      199.86      210.01      213.78      211.05      202.87

  BUILDLEN S0001      104.29      135.12      161.84      183.64      199.86      210.01
  BUILDLEN S0001      213.78      211.05      202.87      211.72      214.13      210.04
  BUILDLEN S0001      199.56      183.02      160.92      133.93      102.87      70.30
  BUILDLEN S0001      104.29      135.12      161.84      183.64      199.86      210.01

```

BUILDLLEN	S0001	213.78	211.05	202.87	211.72	214.13	210.04
BUILDLLEN	S0001	199.56	183.02	160.92	133.93	102.87	70.30
XBADJ	S0001	-97.69	-129.44	-157.25	-180.28	-197.84	-209.38
XBADJ	S0001	-214.56	-213.23	-205.41	-203.56	-195.53	-181.55
XBADJ	S0001	-162.06	-137.64	-109.04	-77.13	-42.88	-7.32
XBADJ	S0001	-6.60	-5.68	-4.59	-3.36	-2.02	-0.63
XBADJ	S0001	0.79	2.18	2.54	-8.16	-18.60	-28.49
XBADJ	S0001	-37.50	-45.38	-51.88	-56.80	-60.00	-62.98
YBADJ	S0001	97.70	88.46	76.53	62.28	46.13	28.58
YBADJ	S0001	10.17	-8.56	-27.83	-45.55	-61.88	-76.33
YBADJ	S0001	-88.46	-97.91	-104.38	-107.67	-107.70	-103.97
YBADJ	S0001	-97.70	-88.46	-76.53	-62.28	-46.13	-28.58
YBADJ	S0001	-10.17	8.56	27.83	45.55	61.88	76.33
YBADJ	S0001	88.46	97.91	104.38	107.67	107.70	103.97

URBANSRC ALL
SRCGROUP S0001 S0001
SRCGROUP ALL

SO FINISHED

**

** AERMOD Receptor Pathway

**
**

RE STARTING
INCLUDED "25495 All Rec.rou"

RE FINISHED
**

** AERMOD Meteorology Pathway

**
**

ME STARTING
SURFFILE "D:\MET Data\Int 10-14 N1MD.SFC"
PROFFILE "D:\MET Data\Int 10-14 N1MD.PFL"
SURFDATA 93225 2010
UAIRDATA 23230 2010 OAKLAND/WSO_AP
PROFBASE 7.0 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\25000-25499\25495\25495 All Rec\25495 All Rec.AD\01H1GALL.PLT" 31
PLOTFILE 1 S0001 1ST "L:\SSD FOLDERS\Modeling\25000-25499\25495\25495 All Rec\25495 All Rec.AD\01H1G001.PLT" 32
PLOTFILE PERIOD ALL "L:\SSD FOLDERS\Modeling\25000-25499\25495\25495 All Rec\25495 All Rec.AD\PE00GALL.PLT" 33

PLOTFILE PERIOD S0001 "L:\SSD FOLDERS\Modeling\25000-25499\25495\25495 All
Rec\25495 All Rec.AD\PE00G000.PLT" 34

SUMMFILE "L:\SSD FOLDERS\Modeling\25000-25499\25495\25495 All Rec\25495 All
Rec.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: 25495ALL
 Project Output Directory: I:\SSD FOLDERS\Modelling\25000-25499\25495\25495 All Rec\25495ALL
 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	StkID	ProID	POLLID	PolAbbrv	Multi	Annual Ems (lbs/yr)	MaxHr Ems (lbs/hr)	MWAF
S0001	0	0	9901	Diese1ExhPM	1	14.15	0.28	1

Ground level concentration files (\g1c\)

9901MAXHR.txt
 9901PER.txt

POLLUTANT HEALTH INFORMATION
 Health Database: C:\HARP2\Tables\HEALTH1.mdb
 Health Table Version: HEALTH16088
 Official: True

POLLID	PolAbbrv	InhCancer	OralCancer	AcuteREL	InhChronicREL	OralChronicREL	InhChronic8HRREL
9901	Diese1ExhPM	1.1			5		

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
 AERMAT: 11103
 BRIPPRM: 04274
 AERPLOT: 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\)

25495A11ResCancerRisk.csv
25495A11ResCancerRiskSumbYRec.csv
25495A11ResGICList.csv
25495A11ResHRAInput.hra
25495A11ResNCAcutterRisk.csv
25495A11ResNCAcutterRiskSumbYRec.csv
25495A11ResNCCChronicRisk.csv
25495A11ResNCCChronicRiskSumbYRec.csv
25495A11ResOutput.txt
25495A11ResPathwayRec.csv
25495A11ResPolDB.csv
25495A11WkCancerRisk.csv
25495A11WkCancerRiskSumbYRec.csv
25495A11WkGICList.csv
25495A11WkHRAInput.hra
25495A11WkNCAcutterRisk.csv
25495A11WkNCAcutterRiskSumbYRec.csv
25495A11WkNCCChronicRisk.csv
25495A11WkNCCChronicRiskSumbYRec.csv
25495A11WkOutput.txt
25495A11WkPathwayRec.csv
25495A11WkPolDB.csv

Spatial averaging files (\sa\)

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

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\25000-25499\25495\25495 All

Rec\25495ALL\hra\25495AllResCancerRisk.csv

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

FOLDERS\Modeling\25000-25499\25495\25495 All

Rec\25495ALL\hra\25495AllResCancerRiskSumByRec.csv

Calculating chronic risk

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

FOLDERS\Modeling\25000-25499\25495\25495 All

Rec\25495ALL\hra\25495AllResNCChronicRisk.csv

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

FOLDERS\Modeling\25000-25499\25495\25495 All

Rec\25495ALL\hra\25495AllResNCChronicRiskSumByRec.csv

Calculating acute risk

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

FOLDERS\Modeling\25000-25499\25495\25495 All

Rec\25495ALL\hra\25495AllResNCACuteRisk.csv

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

FOLDERS\Modeling\25000-25499\25495\25495 All

Rec\25495ALL\hra\25495AllResNCACuteRiskSumByRec.csv

HRA ran successfully

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

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\25000-25499\25495\25495 All
Rec\25495ALL\hra\25495AllWkrCancerRisk.csv

Cancer risk total by receptor saved to: L:\SSD
FOLDERS\Modeling\25000-25499\25495\25495 All
Rec\25495ALL\hra\25495AllWkrCancerRiskSumByRec.csv

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to: L:\SSD
FOLDERS\Modeling\25000-25499\25495\25495 All
Rec\25495ALL\hra\25495AllWkrNCChronicRisk.csv

Chronic risk total by receptor saved to: L:\SSD
FOLDERS\Modeling\25000-25499\25495\25495 All
Rec\25495ALL\hra\25495AllWkrNCChronicRiskSumByRec.csv

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to: L:\SSD
FOLDERS\Modeling\25000-25499\25495\25495 All
Rec\25495ALL\hra\25495AllWkrNCACuteRisk.csv

Acute risk total by receptor saved to: L:\SSD
FOLDERS\Modeling\25000-25499\25495\25495 All
Rec\25495ALL\hra\25495AllWkrNCACuteRiskSumByRec.csv

HRA ran successfully

25495AllWkrOutput

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: Compression Ignited Emergency Standby Generator Operation (A/C 25495)

Project Applicant: Penske Logistics LLC. - PO Box 7635, Reading, PA 19603

Project Location - Specific:

4040 Vista Park Ct., Sacramento, CA 95834

Project Location - City: Sacramento Project Location - County: Sacramento

Description of Nature, Purpose and Beneficiaries of Project:

The project beneficiary, Penske Logistics LLC., is permitting a new emergency standby engine. Penske Logistics LLC. is handling distribution for coffee shop chain Starbucks in the Sacramento area and will be using the emergency standby engine to drive a generator for electrical power during outages.

Name of Public Agency Approving Project: Sacramento

Name of Person or Agency Carrying Out Project: Penske Logistics LLC.

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. 15061(b)(3)

Reasons why project is exempt:

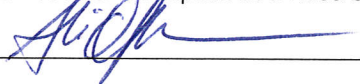
SMAQMD determined there is no possibility that the project will have a significant adverse impact on the environment because its air pollutant emissions are within the Districts' acceptable limits and no other environmental medium is expected to be adversely affected. Also, this permitting action is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

Lead Agency

Contact Person: Ali Othman Area Code/Telephone/Extension: 916-874-4857

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: 12-5-17 Title: Program Supervisor

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: _____