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September 29, 2020
Project No: 19-07875

Brianna Bohonock
Circlepoint
2100 West Orangewood Avenue, Suite 215
Orange, California 92868
Via email: b.bohonok@circlepoint.com

Subject: CoreSite SV9 Data Center Supplemental Air Quality Memorandum

Dear Ms. Bohonock:

Rincon prepared the Air Quality and Greenhouse Gas Study for the CoreSite SV9 Data Center in January 2020 to support the project's California Environmental Quality Act (CEQA) Initial Study-Mitigated Negative Declaration. During the project's public review period the City of Santa Clara received two comments related to air quality. One comment, from the Bay Area Air Quality Management District (BAAQMD), requested revisions to the project's cumulative health risk screening analysis. A second comment, from a member of the public, identified a sensitive receptor near the project site not accounted for in the Air Quality and Greenhouse Gas Study. This memorandum provides a revised health risk assessment analysis for the proposed project.

Background

The project site is in central Santa Clara, south of US Highway 101 (U.S. 101) and west of the San Tomas Expressway. Land use designations surrounding the project site consist of Light Industrial and Planned Industrial to the west, south, and east; Low Intensity Office/Research and Development to the north, and High Intensity Office/Research and Development farther to the west. Nearby uses include data centers, research and development buildings, biotech companies and other digital technology-oriented uses.

The nearest sensitive receptors identified in the Air Quality and Greenhouse Gas Study were residences located approximately 1,400 feet northwest of the project site. However, a comment letter received during the public review period stated that a sensitive receptor within 1,000 feet of the project site was not identified in the study. The Grace Adult Day Health Care Center, located at 3010 Olcott Street, is approximately 375 feet northeast of the project site boundary. Air quality sensitive receptors are identified as that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; people engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. Therefore, the Grace Adult Day Health Care Center is considered a sensitive receptor.

On a conference call with BAAQMD on August 25, 2020 the air district noted that the cumulative health risk screening analysis should include emissions data from nearby data centers within 1,000 feet of the project site, specifically the CoreSite SV7 Data Center located northwest of the project site. The initial



cumulative health risk assessment analysis was conducted using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool* (2012) which has since been replaced with *Permitted Stationary Source Risk and Hazards* mapping tool (2017) that includes data from the CoreSite SV7 Data Center. Therefore, the screening health risk analysis has been revised as described below to include the Grace Adult Day Health Care Center as a new sensitive receptor and the nearby CoreSite Data Centers as stationary sources.

Significance Thresholds

BAAQMD has established screening criteria applicable to projects that would introduce new stationary sources of toxic air contaminant (TAC) emissions or add vehicle trips to major roadways, which are sources of TAC and particulate matter up to 2.5 microns (PM_{2.5}) emissions. Community risk and hazards screening tools from BAAQMD can be applied to provide conservative estimates of TAC exposure. If these screening tools indicate that TAC levels from the project may be excessive, BAAQMD recommends that further, more refined analysis, including site-specific dispersion modeling, be conducted for more accurate (and usually lower) risk and hazard estimates. The screening tools provide estimates for PM_{2.5} concentrations, cancer risk, chronic hazard risk, and acute hazard risk from stationary, roadway, and highway sources. The risk and hazard screening analysis process includes the identification of emissions sources (permitted sources, highways, and major roadways [more than 10,000 average daily vehicle trips]) within 1,000 feet of the project's fence line using BAAQMD screening tools. If impacts due to emissions of TACs or PM_{2.5} from any individual source would exceed any of the thresholds shown below, the project would result in a significant impact. Thresholds include:

- Non-compliance with a qualified risk reduction plan;
- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 would be a cumulatively considerable contribution; or
- An incremental increase of greater than 0.3 micrograms per cubic meter (µg/m³) annual average PM_{2.5} would be a cumulatively considerable contribution.

Methodology

Risk and Hazard Screening

BAAQMD provides community risk and hazards screening tools for agencies to use in deciding whether there should be further environmental review of a project. According to BAAQMD, the screening tools provide conservative estimates and a more refined analysis, including site-specific dispersion modeling, should be conducted for more accurate (and usually lower) risk and hazard estimates¹ The screening tools provide estimates for PM_{2.5} concentrations, cancer risk, chronic hazard risk, and acute hazard risk from stationary, roadway, and highway sources. The risk and hazard screening analysis process includes the following steps:

1. Identify emissions sources (permitted sources, highways, major roadways, and railways) within 1,000 feet of the project's fence line using BAAQMD screening tools. If there are no sources within 1,000 feet of the project, then there is no significant impact for risk and hazards and no

¹ BAAQMD. 2012. *Recommended Methods for Screening and Modeling Local Risks and Hazards*.
<http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf>



further analysis is needed. If emissions sources exist within 1,000 feet of the project, proceed to Step 2 to conduct initial conservative screening.

2. If emissions sources are present within 1,000 feet of the project site, conduct initial conservative screening using BAAQMD screening tools, comparing each source's estimated cancer risk, $PM_{2.5}$, and hazard values to applicable thresholds. Sum all of the sources' impacts for comparison to applicable cumulative thresholds. If the risk and hazard estimates for an individual source and/or the cumulative impacts are below BAAQMD's thresholds of significance, then there is no significant impact for risk and hazards and no further analysis is needed. If thresholds are exceeded, then proceed to Step 3 to conduct advanced screening for more refined estimates.
3. If emissions sources present within 1,000 feet of the project site have risk and hazards above BAAQMD thresholds using the method described in Step 2, conduct advanced screening for more refined estimates. To refine estimates, scale highway and roadway risk and $PM_{2.5}$ values to reflect actual traffic and distances from the project using BAAQMD methods from the Modeling Report.¹ If the refined risk and hazard estimates are below applicable thresholds, then there is no significant impact for risk and hazards and no further analysis is needed. If thresholds are exceeded, then proceed to Step 4 to conduct refined modeling analysis.
4. If emissions sources present within 1,000 feet of the project site have refined risk and hazards estimates above BAAQMD thresholds as determined in Step 3, conduct refined modeling analysis. For highways and major roadways, use local traffic and meteorology data to model risk and hazards using BAAQMD methods from the Modeling Report.¹ If the risk and hazard estimates with refined modeling are below thresholds, then there is no significant impact for risk and hazards and no further analysis is needed. If thresholds are exceeded, then risk reduction strategies should be implemented.

According to BAAQMD, the adult/elderly care center is considered a sensitive air quality receptor. The California Air Resources Board has identified diesel particulate matter (DPM) as the primary airborne carcinogen in the state. The primary source of DPM from the project operation is exhaust from the 16 emergency diesel generators. In addition, BAAQMD recommends analyzing nearby permitted stationary sources, major roadways, highways, and railroads. In order to reassess potential exposure to TACs for sensitive receptors to a new source, the BAAQMD risk and hazard screening analysis using BAAQMD's screening tools was used to assess whether the project may subject nearby sensitive receptors to substantial sources of TACs. Sources within 1,000 ft of the project site were evaluated for cumulative effects per BAAQMD's *CEQA Air Quality Guidelines*. There are no railways or freeways within 1,000 feet of the project site. Therefore, only the major road sources were included in the cumulative analysis.

Health Risks from Generator Operation

Per guidance in BAAQMD's *Recommended Methods for Screening and Modeling Local Risks and Hazards* (2012), for new sources there is no project radius recommended. Rather the location of the maximum risk, hazard, and $PM_{2.5}$ concentration from the new source affecting a receptor should be identified. The nearest sensitive receptors to the project site are the attendants of the Grace Adult Day Health Care Center located approximately 375 feet to the northeast of the project site boundary. Although the generators would be located in the south east corner of the project site adjacent to the Central Expressway approximately 675 feet southwest of the Grace Adult Day Health Care Center, this analysis is conservatively based on the distance between the receptor and the projects boundary. As



recommended by the BAAQMD *CEQA Air Quality Guidelines*², the estimated risk associated with sources permitted by BAAQMD, such as the proposed diesel generators, should be evaluated first using a screening-level analysis. BAAQMD’s *Risk and Hazards Emissions Screening Calculator* (Beta Version) was used to calculate cancer risk, chronic hazard index, and PM_{2.5} concentrations using the emissions data for the operation of all 16 diesel generators for 50 hours per year, the maximum allowed operational time under BAAQMD stationary source permits.

Diesel generator emission estimates were based on manufacturer specifications, exhaust emission data for U.S. Environmental Protection Agency (EPA) Tier 2 emissions standards, and BAAQMD’s maximum allowed operational duration of the generators (i.e., 50 hours/year). To evaluate ground level concentration of DPM and PM_{2.5}, it was conservatively assumed that DPM emissions would be equivalent to the generator PM emissions and PM_{2.5} emissions made up 97.6 percent of total generator PM emissions.³ Based on the manufacturer exhaust emissions rate certification and implementation of best available control technology, daily average DPM emissions and PM_{2.5} emissions would be approximately be 0.18 pounds per day, as included in the Air Quality and Greenhouse Gas Emissions Study (Attachment A). Consequently, at the project site the associated cancer risk would be 253.2 in one million, the chronic hazard index would be 0.068, and PM_{2.5} emissions would be 0.34 µg/m³. BAAQMD’s *Diesel Internal Combustion Engine Distance Multiplier Tool* further refines the screening values for risk and PM_{2.5} based on the distance to the nearest receptor. The estimated cancer risk, hazard index and PM_{2.5} concentration at approximately 375 feet from the project site boundary was compared to the BAAQMD single source thresholds.

Table 1 summarizes the results associated with operation of the generators equipped with a diesel particulate filter for 50 hours at the nearest sensitive receptor considered the maximum exposed individual (MEI) in this revised analysis.

Table 1 Health Risks from Generator Operation (50 Hours Per Year at 375 Feet)

Scenario	Excess Cancer Risk (per million)	Chronic Health Risk ^{1,2}	PM _{2.5} µg/m ³ annual average
Maximum Exposed Individual	43.05	0.012	0.058
BAAQMD Significance Threshold	>10	>1	>0.3
Threshold Exceeded?	Yes	No	No

PM_{2.5} = particulate matter less than 2.5 microns in size; µg/m³ = micrograms per cubic meter;

¹ Noncancer health impacts are determined by dividing the airborne concentration at the receptor by the appropriate Reference Exposure Level (REL) for that substance. A REL is defined as the concentration at which no adverse noncancer health effects are anticipated. Because noncancer health impacts are assessed as the ratio of airborne concentration versus the REL, the resulting hazard index is unitless.

² There is no acute reference exposure level for diesel exhaust to calculate acute health risk. Furthermore, except for unusual circumstances of high exposure, Office of Environmental Health Hazard Assessment does not recommend acute analysis for DPM.

² Bay Area Air Quality Management District. 2017. California Environmental Quality Act Air Quality Guidelines. May 2017. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

³ South Coast Air Quality Management District. 2006. Final -Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds. October 2006. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/particulate-matter-\(pm\)-2.5-significance-thresholds-and-calculation-methodology/final_pm2_5methodology.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/particulate-matter-(pm)-2.5-significance-thresholds-and-calculation-methodology/final_pm2_5methodology.pdf?sfvrsn=2)



As shown in Table 1, operation of the diesel generators equipped with a DPF for 50 hours per year would result in an exceedance of BAAQMD single source significance thresholds for excess cancer risk at the nearest sensitive receptor, Grace Adult Day Health Care Center, but not chronic risk or ground level PM_{2.5} concentrations. Mitigation Measure AQ-2, as revised from the prior version of the Air Quality and Greenhouse Gas Study and Draft Initial Study-Mitigated Negative Declaration, would be required to reduce health risks to nearby sensitive receptors associated with DPM exposure from generator operation. Reduced health risks with implementation of Mitigation Measure AQ-2 are shown in Table 4.

Cumulative Health Risks from Generator Operation

BAAQMD's *Recommended Methods for Screening and Modeling Local Risks and Hazards*⁴ recommends assessing cumulative impacts of a new source or sources in combination with existing sources located within 1,000 feet of the project site. Cumulative impacts to the maximally impacted receptor should include the new source as well as any additional sources located within a 1,000-foot radius of the project site. BAAQMD's Stationary Source Inquiry Form and request process was used to obtain the most updated health risk and PM_{2.5} values associated with facilities permitted stationary sources within 1,000 feet of the project site, including nearby data centers as requested by BAAQMD. BAAQMD's *Permitted Stationary Source Risk and Hazards* mapping tool showed 17 other stationary sources within 1,000 feet of the project site.⁵ The source types for all identified stationary sources were generators except for NVIDIA (Facility ID 13074) which included boilers in addition to permitted generators. Because the project site is also located adjacent to the Central Expressway, BAAQMD provided cancer risk and PM_{2.5} concentrations associated with nearby highways, major roadways >30,000 AADT (annual average daily traffic), and railroads at the project site. BAAQMD utilized AERMOD and EMFAC2014 data for fleet mix following the California Office of Environmental Health Hazard Assessment's 2015 *Air Toxics Hot Spots Guidance* methods to model health risk and PM_{2.5} concentrations in 20- by 20-meter grid cells across the Bay Area.

The revised cumulative analysis at the MEI included stationary sources as shown in Table 2. Because the *Distance Adjustment Multiplier Tool for Diesel Internal Combustion (IC)* in the *Risk and Hazards Emissions Screening Calculator* (Beta Version) does not extend beyond 919 feet, the maximum distance adjustment multiplier provided in the tool was used for each stationary source that was greater than 919 feet from the MEI to provide a conservative analysis.

⁴ Bay Area Air Quality Management District. 2011. Recommended Methods for Screening and Modeling Local Risks and Hazards. Version 2.0. May 2011. <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx>

⁵ BAAQMD confirmed via email on September 9, 2020, that the health risk data for these sources is the mostly recently available.



Table 2 Stationary Sources within 1,000 feet of the Project Site

Source Name	Facility Identification Number	Distance to MEI
NVIDIA	13074	1,440 feet southeast
ON Semiconductors Inc.	19856	840 feet southwest
A100 US LLC	22375	1,430 feet southwest
CoreSite facilities	19539-1, 19539-2, 19539-3, 19539-4, 19539-5, 19539-6, 19539-7, 19539-8, 19539-9, and 19539-remainder	1,080 feet southwest
Vantage Data Management	20295-24, 20295-25, 20295-26, and 20295-27	1,675 feet southwest

Source: BAAQMD. 2017. Permitted Stationary Source Risk and Hazards mapping tool.

The revised cumulative analysis includes risk and PM_{2.5} concentration associated with roadway traffic on the Central Expressway between Bowers Avenue and San Tomas Expressway, approximately 730 feet south of the MEI. Health risk and PM_{2.5} concentrations from the Central Expressway at the MEI were obtained from BAAQMD. Cumulative impacts at the MEI from project operation and other sources within 1,000 feet of the project site are reported in Table 3.

Table 3 Cumulative Health Risks at the MEI

Source	Excess Cancer Risk (per million)	Chronic Health Risk ¹	PM _{2.5} µg/m ³ annual average
Unmitigated Project Operation	43.04	0.012	0.058
NVIDIA (Facility ID 13074) ²	1.86	0.0032	0.013
ON Semiconductor Inc. (Facility ID 19856)	0.016	0	0
A100 US LLC (Facility ID 22375) ²	2.06	0.002	0.0028
Coresite (Facility ID 19539-1) ²	0.41	0.0012	0.0004
Coresite (Facility ID 19539-2) ²	0.41	0.0012	0.0004
Coresite (Facility ID 19539-3) ²	0.41	0.0012	0.0004
Coresite (Facility ID 19539-4) ²	0.41	0.0012	0.0004
Coresite (Facility ID 19539-5) ²	0.31	0.0012	0.0004
Coresite (Facility ID 19539-6) ²	0.24	0.0008	0.0004
Coresite (Facility ID 19539-7) ²	0.24	0.0008	0.0004
Coresite (Facility ID 19539-8) ²	0.24	0.0008	0.0004



Coresite (Facility ID 19539-9) ²	0.24	0.0008	0.0004
Coresite (Facility ID 19539-Remainder) ²	0.90	0.0024	0.0012
Vantage Data Centers Management (Facility ID 20295-24) ²	0.04	0	0
Vantage Data Centers Management (Facility ID 20295-25) ²	0.02	0	0
Vantage Data Centers Management (Facility ID 20295-26) ²	0.05	0	0
Vantage Data Centers Management (Facility ID 20295-27) ²	0.05	0	0
Central Expressway ³	18.75	--	0.404
Cumulative Total	69.69	0.03	0.4826
BAAQMD Significance Threshold	>100	>10	>0.8
Threshold Exceeded?	No	No	No

¹ Noncancer health impacts are determined by dividing the airborne concentration at the receptor by the appropriate Reference Exposure Level (REL) for that substance. A REL is defined as the concentration at which no adverse noncancer health effects are anticipated. Because noncancer health impacts are assessed as the ratio of airborne concentration versus the REL, the resulting hazard index is unitless. See Attachment B for calculations and HRA data.

²Calculated using the BAAQMD's *Risk and Hazards Emissions Screening Calculator* (Beta Version) at the maximum distance available in the distance multiplier tools. For backup diesel generators the maximum distance is 918.6 feet and for generic cases is 984.3 feet.

³Based on health risk raster data for Major Streets provided by BAAQMD. No highways or railways within 1,000 feet of the project site.

As shown in Table 3, cumulative sources of TACs would not result in an exceedance of annual PM_{2.5} concentrations, chronic or cancer health risks above cumulative significance thresholds at the MEI with operation of the diesel generators equipped with a diesel particulate filter for 50 hours per year.

Mitigation Measures

Operation of the 16 diesel generators would present a potential excess cancer risk due to DPM exposure if operated at the maximum allowed operational time under BAAQMD stationary source permits. Therefore, the Mitigation Measure AQ-2 modified from the prior version of the Air Quality and Greenhouse Gas Study and the Draft Initial Study-Mitigated Negative Declaration focuses on reduction of DPM emissions through limiting operation of the diesel generators. The following revised mitigation measure would be required to reduce impacts to a less than significant level. Revisions are shown in strikeout and underline.

Mitigation Measure AQ-2

In order to reduce NO_x emissions and health risk below the BAAQMD threshold, the applicant shall limit non-emergency operation (including testing and maintenance) of each back up diesel generator to no more than 1118 ~~1118~~ hours per year.



Significance After Mitigation

Mitigation Measure AQ-2 would require operational hours for each generator not exceed 11 hours per year. Operational emissions after implementation of Mitigation Measure AQ-2 were calculated based on manufacturer specifications, exhaust emission data for U.S. EPA Tier 2 emissions standards, and assuming each generator would be equipped with a DPF. Daily average DPM emissions and PM_{2.5} emissions from operation of all project generators after implementation of Mitigation Measure AQ-2 would be approximately be 0.04 pounds per day. Consequently, at the project site the associated cancer risk would be 56.6 in one million, the chronic hazard index would be 0.015, and PM_{2.5} emissions would be 0.074 µg/m³. The BAAQMD’s *Diesel Internal Combustion Engine Distance Multiplier Tool* was used to further refine the screening values for risk and PM_{2.5} based on the distance to the nearest receptor (i.e., approximately 375 feet). As shown in Table 4, limitation of non-emergency operation of the generators to 11 hours per year under Mitigation Measure AQ-2 would reduce health risk to below the BAAQMD individual threshold and would therefore ensure that the project would not expose sensitive receptors to substantial pollutant concentrations.

Table 4 Health Risks from Generator Operation (11 Hours Per Year at 375 Feet)

Scenario	Excess Cancer Risk (per million)	Chronic Health Risk ^{1,2}	PM _{2.5} µg/m ³ annual average
Maximum Exposed Individual	9.63	0.0026	0.013
BAAQMD Significance Threshold	>10	>1	>0.3
Threshold Exceeded?	No	No	No

PM_{2.5} = particulate matter less than 2.5 microns in size; µg/m³ = micrograms per cubic meter;

¹ Noncancer health impacts are determined by dividing the airborne concentration at the receptor by the appropriate Reference Exposure Level (REL) for that substance. A REL is defined as the concentration at which no adverse noncancer health effects are anticipated. Because noncancer health impacts are assessed as the ratio of airborne concentration versus the REL, the resulting hazard index is unitless.

² There is no acute reference exposure level for diesel exhaust to calculate acute health risk. Furthermore, except for unusual circumstances of high exposure, Office of Environmental Health Hazard Assessment does not recommend acute analysis for DPM.

Conclusions

Operation of the backup diesel generators for 50 hours per year (the permitting maximum) would exceed BAAQMD significance thresholds for health risk for an individual source at the nearest sensitive receptor (Grace Adult Day Health Care Center). Mitigation Measure AQ-2, as revised from the Air Quality and Greenhouse Gas Study, would limit non-emergency operation of the generators to 11 hours annually, thereby reducing the associated health risk below BAAQMDs individual health risk threshold. It should be noted that this level of operation is in line with applicant’s standard testing and maintenance schedule where during generator testing, the engines would be tested with no engine load for 5 to 10 minutes per month. In addition to monthly engine testing and operation for maintenance purposes, each engine would undergo quarterly testing at site load or 100 percent load. Each engine would also be tested at full load (100 percent load) for 4 hours every 36 to 60 months.

Project operation would not result in an exceedance of BAAQMD’s cumulative health risk threshold at the MEI due to combined health risk from the project operation and other permitted and non-permitted



sources within 1,000 feet of the project site when operating under the permitting maximum of 50 hours annually. Therefore, implementation of Mitigation Measure AQ-2 would not result in an exceedance of BAAQMD's cumulative health risk threshold.

Sincerely,
Rincon Consultants, Inc.

A handwritten signature in blue ink that reads "Kari Zajac".

Kari Zajac, MESM
Project Manager

Attachments

Attachment A: Backup Diesel Generator Emissions

Attachment B: BAAQMD Health Risk Calculators

Attachment A

Backup Diesel Generator Emissions

Stationary Source Criteria Pollutants

Emergency Generator (Cummins C3500 D6e) - Full Standby

Gross engine output bhp @ 100% load 5,051
 Annual use per generator (Hours) **50**
 Number of Units 16
 Total Annual Hours 800

	HC	NO _x	CO	PM	PM _{2.5}
Emissions (full standby) (g-hp/hr)	0.05	6.10	0.40	0.05	0.05
Emissions (full standby) (g/sec)	0.07	8.56	0.56	0.07	0.07
Uncontrolled Emissions (full standby) (lbs/hr)	0.56	67.93	4.45	0.56	0.54
DPF Controlled Emissions (full standby) (lbs/hr)	0.56	67.93	4.45	0.08	0.08
Uncontrolled Emissions Total lbs/year	27.84	3396.36	222.71	27.84	27.17
DPF Controlled Emissions Total lbs/year	27.84	3396.36	222.71	4.18	4.08
<i>Individual Generator</i>					
DPF Controlled Emissions Total tons/year	0.01	1.70	0.11	0.00	0.00
Daily Avg (lbs/day)	0.08	9.31	0.61	0.01	0.01
<i>All Generators</i>					
DPF Controlled Emissions Total tons/year	0.22	27.17	1.78	0.03	0.03
Daily Avg (lbs/day)	1.22	148.88	9.76	0.18	0.18

Notes:

- Exhaust emissions were obtained from the Cummins C3500 D6e emission data sheet (EPA Tier 2)
- PM_{2.5} estimated as 97.6% of PM from diesel combustion.

Conversions

1lb=453.59g
 2000lbs = 1 ton

GHG Emissions for #2 Distillate Diesel Fuel Consumption

Operation	Fuel Consumption (gals/hr)	50 Hrs Operation of one Engine		50 Hrs Operation of all Engines		16 Hrs of Operation of One Engine		16 Hrs of Operation of All Engines	
		Fuel Consumption (gallons)	MT CO ₂ e	Fuel Consumption (gallons)	MT CO ₂ e	Fuel Consumption (gallons)	MT CO ₂ e	Fuel Consumption (gallons)	MT CO ₂ e
100% load	241	12,050.00	533.82	192,800.00	8,541.04	3,856.00	170.82	61,696.00	2,733.13
75% load	184	9,200.00	407.56	147,200.00	6,520.96	2,944.00	130.42	47,104.00	2,086.71
50% load	134	6,700.00	296.81	107,200.00	4,748.96	2,144.00	94.98	34,304.00	1,519.67
25% load	78	3,900.00	172.77	62,400.00	2,764.32	1,248.00	55.29	19,968.00	884.58

Source: Cat C175-16 Diesel Generator Sets manufacturer specifications

#2 Distillate Diesel Emission factors

kg CO ₂ per gallon	10.21
kg CH ₄ per gallon	0.41
kg N ₂ O per gallon	0.08

Source: Federal Register EPA; 40 CFR Part 98; e-CFR, June 13, 2017 (see link below). Table C-1, Table C-2, Table AA-1.

Note: 1 kg = 0.001 Metric Tons (MT)

CO₂ Equivalencies

CO ₂	1
CH ₄	25
N ₂ O	298

Source: Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment

Stationary Source Criteria Pollutants

Emergency Generator (Cummins C3500 D6e) - Full Standby

Gross engine output bhp @ 100% load 5,051
 Annual use per generator (Hours) **11**
 Number of Units 16
 Total Annual Hours 176

	HC	NO _x	CO	PM	PM _{2.5}
Emissions (full standby) (g-hp/hr)	0.05	6.10	0.40	0.05	0.05
Emissions (full standby) (g/sec)	0.07	8.56	0.56	0.07	0.07
Uncontrolled Emissions (full standby) (lbs/hr)	0.56	67.93	4.45	0.56	0.54
DPF Controlled Emissions (full standby) (lbs/hr)	0.56	67.93	4.45	0.08	0.08
Uncontrolled Emissions Total lbs/year	6.12	747.20	49.00	6.12	5.98
DPF Controlled Emissions Total lbs/year	6.12	747.20	49.00	0.92	0.90
<i>Individual Generator</i>					
DPF Controlled Emissions Total tons/year	0.00	0.37	0.02	0.00	0.00
Daily Avg (lbs/day)	0.02	2.05	0.13	0.00	0.00
<i>All Generators</i>					
DPF Controlled Emissions Total tons/year	0.05	5.98	0.39	0.01	0.01
Daily Avg (lbs/day)	0.27	32.75	2.15	0.04	0.04

Notes:

- Exhaust emissions were obtained from the Cummins C3500 D6e emission data sheet (EPA Tier 2)
- PM_{2.5} estimated as 97.6% of PM from diesel combustion.

Conversions

1lb=453.59g
 2000lbs = 1 ton

GHG Emissions for #2 Distillate Diesel Fuel Consumption

Operation	Fuel Consumption (gals/hr)	50 Hrs Operation of one Engine		50 Hrs Operation of all Engines		16 Hrs of Operation of One Engine		16 Hrs of Operation of All Engines	
		Fuel Consumption (gallons)	MT CO ₂ e	Fuel Consumption (gallons)	MT CO ₂ e	Fuel Consumption (gallons)	MT CO ₂ e	Fuel Consumption (gallons)	MT CO ₂ e
100% load	241	12,050.00	533.82	192,800.00	8,541.04	3,856.00	170.82	61,696.00	2,733.13
75% load	184	9,200.00	407.56	147,200.00	6,520.96	2,944.00	130.42	47,104.00	2,086.71
50% load	134	6,700.00	296.81	107,200.00	4,748.96	2,144.00	94.98	34,304.00	1,519.67
25% load	78	3,900.00	172.77	62,400.00	2,764.32	1,248.00	55.29	19,968.00	884.58

Source: Cat C175-16 Diesel Generator Sets manufacturer specifications

#2 Distillate Diesel Emission factors

kg CO ₂ per gallon	10.21
kg CH ₄ per gallon	0.41
kg N ₂ O per gallon	0.08

Source: Federal Register EPA; 40 CFR Part 98; e-CFR, June 13, 2017 (see link below). Table C-1, Table C-2, Table AA-1.

Note: 1 kg = 0.001 Metric Tons (MT)

CO₂ Equivalencies

CO ₂	1
CH ₄	25
N ₂ O	298

Source: Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment

Appendix B

BAAQMD Health Risk Calculations



Step 1:
Enter Facility Data

Plant Name: **CoreSite Santa Clara Center SV9**

Plant No.:

Step 3:
Specify Source Type

Does facility have only diesel backup generators? **yes**

Is this analysis for a gas station? **no**

Step 2:
Estimate Distance

What is the distance (m) from the facility boundary to the MEI?

Step 5:
Read Estimates

Total Cancer Risk: **253.204** per 1,000,000

Total Chronic Hazard: **0.068**

Total PM2.5 Concentration: **0.340** µg/m³

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission <small>(lb/day)</small>	Cancer <small>(# / 1,000,000)</small>	Chronic <small>(Index)</small>	Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		1.80E-01			0.34
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	0.00E+00			
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	0.00E+00			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			
CHLORINE DIOXIDE	10049044	0.00E+00			
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00			
CHLORO BENZENE	108907	0.00E+00			
CHLOROFORM ¹	67663	0.00E+00			
Chlorophenols	87865	0.00E+00			
PENTACHLOROPHENOL	87865	0.00E+00			
2,4,6-TRICHLOROPHENOL	88062	0.00E+00			
CHLOROPICRIN	76062	0.00E+00			
p-CHLORO-o-TOLUIDINE	95692	0.00E+00			
CHROMIUM 6 ²	18540299	0.00E+00			
Barium chromate ²	10294403	0.00E+00			
Calcium chromate ²	13765190	0.00E+00			
Lead chromate ²	7758976	0.00E+00			
Sodium dichromate ²	10588019	0.00E+00			
Strontium chromate ²	7789062	0.00E+00			
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00			
COPPER AND COMPOUNDS	7440508	0.00E+00			
p-CRESIDINE	120718	0.00E+00			
CRESOLS	1319773	0.00E+00			
M-CRESOL	108394	0.00E+00			
O-CRESOL	95487	0.00E+00			
P-CRESOL	106445	0.00E+00			

CUPFERRON	135206	0.00E+00
Cyanide And Compounds (inorganic)	57125	0.00E+00
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00
2,4-DIAMINOANISOLE	615054	0.00E+00
2,4-DIAMINOTOLUENE	95807	0.00E+00
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00
1,4-DICHLORO BENZENE (p-Dichlorobenzene)	106467	0.00E+00
3,3-DICHLORO BENZIDINE	91941	0.00E+00
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00
DIETHANOLAMINE	111422	0.00E+00
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00
2,4-DINITROTOLUENE	121142	0.00E+00
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00
1,2-EPOXYBUTANE	106887	0.00E+00
ETHYL BENZENE	100414	0.00E+00
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00
ETHYLENE GLYCOL	107211	0.00E+00
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00
ETHYLENE THIOUREA	96457	0.00E+00
Fluorides	1101	0.00E+00
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00
FORMALDEHYDE	50000	0.00E+00
GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLORO BENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta-HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) values also apply to:	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITROSO-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00

NAPTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00		
NICKEL AND COMPOUNDS ² (values also apply to:)	7440020	0.00E+00		
Nickel acetate ²	373024	0.00E+00		
Nickel carbonate ²	3333673	0.00E+00		
Nickel carbonyl ²	13463393	0.00E+00		
Nickel hydroxide ²	12054487	0.00E+00		
Nickelocene ²	1271289	0.00E+00		
NICKEL OXIDE ²	1313991	0.00E+00		
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00		
Nickel subsulfide ²	12035722	0.00E+00		
NITRIC ACID	7697372	0.00E+00		
NITROGEN DIOXIDE	10102440	0.00E+00		
p-NITROSODIPHENYLAMINE	156105	0.00E+00		
OZONE	10028156	0.00E+00		
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	1.80E-01	2.53E+02	6.80E-02
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00		
PHENOL	108952	0.00E+00		
PHOSGENE	75445	0.00E+00		
PHOSPHINE	7803512	0.00E+00		
PHOSPHORIC ACID	7664382	0.00E+00		
PHTHALIC ANHYDRIDE	85449	0.00E+00		
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00		
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B[a]P-EQUIV)	50328	0.00E+00		
NAPHTHALENE	91203	0.00E+00		
POTASSIUM BROMATE	7758012	0.00E+00		
1,3-PROPANE SULTONE	1120714	0.00E+00		
PROPYLENE (PROPENE)	115071	0.00E+00		
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00		
PROPYLENE OXIDE	75569	0.00E+00		
SELENIUM AND COMPOUNDS	7782492	0.00E+00		
HYDROGEN SELENIDE	7783075	0.00E+00		
Selenium sulfide	7446246	0.00E+00		
SILICA (Crystalline, Respirable)	7631869	0.00E+00		
SODIUM HYDROXIDE	1310732	0.00E+00		
STYRENE	100425	0.00E+00		
SULFATES	9960	0.00E+00		
SULFUR DIOXIDE	7446095	0.00E+00		
SULFURIC ACID	7664939	0.00E+00		
SULFUR TRIOXIDE	7446719	0.00E+00		
OLEUM	8014957	0.00E+00		
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00		
THIOACETAMIDE	62555	0.00E+00		
TOLUENE	108883	0.00E+00		
Toluene diisocyanates	26471625	0.00E+00		
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00		
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00		
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00		
TRICHLOROETHYLENE	79016	0.00E+00		
TRIETHYLAMINE	121448	0.00E+00		
URETHANE (Ethyl carbamate)	51796	0.00E+00		
Vanadium Compounds	7440622	0.00E+00		
Vanadium (fume or dust)	7440622	0.00E+00		
VANADIUM PENTOXIDE	1314621	0.00E+00		
VINYL ACETATE	108054	0.00E+00		
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00		
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00		
XYLENES (mixed isomers)	1330207	0.00E+00		
m-XYLENE	108383	0.00E+00		
o-XYLENE	95476	0.00E+00		
p-XYLENE	106423	0.00E+00		

TOTAL UNADJUSTED Risk Values 253.204 0.068 0.340

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM_{2.5} concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

Unmitigated operation (50 hrs)

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
115	377.3	0.17	253.204	43.045	0.068	0.012	0.340	0.058
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04		0		0		0

*Distance to MEI: 375 feet

FID	OBJECTID	FACID	Name	Address	City	St	Zip	County	Cancer	Hazard	PM_25	Type	Latitude	Longitude	x	y
1436	1,436	13074	NVIDIA	2701 San T	Santa Clara	CA	95050	Santa Clara	46.46	0.08	0.32	Contact BA	37.373	-121.966	-13577221.77	4491286.508
4375	4,375	19856	ON Semico	2975 Stenc	Santa Clara	CA	95054	Santa Clara	0.32	0	0	Generators	37.375	-121.97	-13577659.59	4491565.097
5651	5,651	22375	A100 US LL	2950 Stenc	Santa Clara	CA	95054	Santa Clara	51.48	0.05	0.07	Generators	37.373	-121.97	-13577642.21	4491238.095
9511	9,511	19539-1	CoreSite	2901 Coror	Santa Clara	CA	95054	Santa Clara	10.26	0.03	0.01	Generators	37.375	-121.972	-13577816.98	4491565.084
9512	9,512	19539-2	CoreSite	2901 Coror	Santa Clara	CA	95054	Santa Clara	10.26	0.03	0.01	Generators	37.375	-121.972	-13577816.98	4491565.084
9513	9,513	19539-3	CoreSite	2901 Coror	Santa Clara	CA	95054	Santa Clara	10.26	0.03	0.01	Generators	37.375	-121.972	-13577816.98	4491565.084
9514	9,514	19539-4	CoreSite	2901 Coror	Santa Clara	CA	95054	Santa Clara	10.26	0.03	0.01	Generators	37.375	-121.972	-13577816.98	4491565.084
9515	9,515	19539-5	CoreSite	2901 Coror	Santa Clara	CA	95054	Santa Clara	7.63	0.03	0.01	Generators	37.375	-121.972	-13577816.98	4491565.084
9516	9,516	19539-6	CoreSite	2901 Coror	Santa Clara	CA	95054	Santa Clara	5.95	0.02	0.01	Generators	37.375	-121.972	-13577812.02	4491566.187
9517	9,517	19539-7	CoreSite	2901 Coror	Santa Clara	CA	95054	Santa Clara	5.95	0.02	0.01	Generators	37.375	-121.972	-13577812.02	4491566.187
9518	9,518	19539-8	CoreSite	2901 Coror	Santa Clara	CA	95054	Santa Clara	5.95	0.02	0.01	Generators	37.375	-121.972	-13577822.42	4491567.386
9519	9,519	19539-9	CoreSite	2901 Coror	Santa Clara	CA	95054	Santa Clara	5.95	0.02	0.01	Generators	37.375	-121.972	-13577822.42	4491567.386
9520	9,520	19539-REM	CoreSite	2901 Coror	Santa Clara	CA	95054	Santa Clara	22.47	0.06	0.03	Contact BA	37.375	-121.972	-13577838.52	4491522.453
9562	9,562	20295-24	Vantage D:	2625 Walsl	Santa Clara	CA	95051	Santa Clara	0.99	0	0	Generators	37.374	-121.973	-13577967.65	4491352.088
9563	9,563	20295-25	Vantage D:	2625 Walsl	Santa Clara	CA	95051	Santa Clara	0.61	0	0	Generators	37.374	-121.973	-13577958.83	4491353.255
9564	9,564	20295-26	Vantage D:	2625 Walsl	Santa Clara	CA	95051	Santa Clara	1.18	0	0	Generators	37.374	-121.973	-13577950.03	4491353.158
9565	9,565	20295-27	Vantage D:	2625 Walsl	Santa Clara	CA	95051	Santa Clara	1.18	0	0	Generators	37.374	-121.973	-13577941.23	4491353.062

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

Mitigated operation (11 hrs)

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
115	377.3	0.17	56.267	9.565	0.015	0.003	0.076	0.013
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04		0		0		0

*Distance to MEI: 375 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

ON Semiconductor Inc

FACID: 19856

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05	0.32	0.016	0	0	0	0
280	918.6	0.04		0		0		0

*Distance to MEI: 840 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

A100 US LLC
 FACID: 22375

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	51.48	2.0592	0.05	0.002	0.07	0.0028

*Distance to MEI: 1,430 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

FACID: 19539-1

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	10.26	0.4104	0.03	0.0012	0.01	0.0004

*Distance to MEI: 1,080 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

FACID: 19539-2

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	10.26	0.4104	0.03	0.0012	0.01	0.0004

*Distance to MEI: 1,080 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM_{2.5} concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

FACID: 19539-3

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	10.26	0.4104	0.03	0.0012	0.01	0.0004

*Distance to MEI: 1,080 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

FACID: 19539-4

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	10.26	0.4104	0.03	0.0012	0.01	0.0004

*Distance to MEI: 1,080 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

FACID: 19539-5

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	7.63	0.3052	0.03	0.0012	0.01	0.0004

*Distance to MEI: 1,080 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

FACID: 19539-6

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	5.95	0.238	0.02	0.0008	0.01	0.0004

*Distance to MEI: 1,080 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

FACID: 19539-7

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	5.95	0.238	0.02	0.0008	0.01	0.0004

*Distance to MEI: 1,080 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM_{2.5} concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

FACID: 19539-8

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	5.95	0.238	0.02	0.0008	0.01	0.0004

*Distance to MEI: 1,080 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

FACID: 19539-9

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	5.95	0.238	0.02	0.0008	0.01	0.0004

*Distance to MEI: 1,080 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

FACID: 19539-Remainder

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	22.47	0.8988	0.06	0.0024	0.03	0.0012

*Distance to MEI: 1,080 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Vantage Data Centers Management
 FACID: 20295-24

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	0.99	0.0396	0	0	0	0

*Distance to MEI: 1,675 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Vantage Data Centers Management

FACID: 20295-25

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	0.61	0.0244	0	0	0	0

*Distance to MEI: 1,675 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Vantage Data Centers Management

FACID: 20295-26

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	1.18	0.0472	0	0	0	0

*Distance to MEI: 1,675 feet

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM_{2.5} concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Vantage Data Centers Management

FACID: 20295-27

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04	1.18	0.0472	0	0	0	0

*Distance to MEI: 1,675 feet



Step 1:
Enter Facility Data
Plant Name CoreSite Santa Clara
Center SV9
Plant No.

Step 3:
Specify Source Type
 Does facility have only diesel backup generators? **yes**
 Is this analysis for a gas station? **no**

Step 2:
Estimate Distance
 What is the distance (m) from the facility boundary to the MEI?

Step 5:
Read Estimates
Total Cancer Risk 56.267 per 1,000,000
Total Chronic Hazard 0.015
Total PM2.5 Concentration 0.076 µg/m³

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission <small>(lb/day)</small>	Cancer <small>(# / 1,000,000)</small>	Chronic <small>(Index)</small>	Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		4.00E-02			0.08
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	0.00E+00			
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	0.00E+00			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			
CHLORINE DIOXIDE	10049044	0.00E+00			
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00			
CHLORO BENZENE	108907	0.00E+00			
CHLOROFORM ¹	67663	0.00E+00			
Chlorophenols	87865	0.00E+00			
PENTACHLOROPHENOL	87865	0.00E+00			
2,4,6-TRICHLOROPHENOL	88062	0.00E+00			
CHLOROPICRIN	76062	0.00E+00			
p-CHLORO-o-TOLUIDINE	95692	0.00E+00			
CHROMIUM 6+ ²	18540299	0.00E+00			
Barium chromate ²	10294403	0.00E+00			
Calcium chromate ²	13765190	0.00E+00			
Lead chromate ²	7758976	0.00E+00			
Sodium dichromate ²	10588019	0.00E+00			
Strontium chromate ²	7789062	0.00E+00			
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00			
COPPER AND COMPOUNDS	7440508	0.00E+00			
p-CRESIDINE	120718	0.00E+00			
CRESOLS	1319773	0.00E+00			
M-CRESOL	108394	0.00E+00			
O-CRESOL	95487	0.00E+00			
P-CRESOL	106445	0.00E+00			

CUPFERRON	135206	0.00E+00
Cyanide And Compounds (inorganic)	57125	0.00E+00
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00
2,4-DIAMINOANISOLE	615054	0.00E+00
2,4-DIAMINOTOLUENE	95807	0.00E+00
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00
1,4-DICHLORO BENZENE (p-Dichlorobenzene)	106467	0.00E+00
3,3-DICHLORO BENZIDINE	91941	0.00E+00
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00
DIETHANOLAMINE	111422	0.00E+00
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00
2,4-DINITROTOLUENE	121142	0.00E+00
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00
1,2-EPOXYBUTANE	106887	0.00E+00
ETHYL BENZENE	100414	0.00E+00
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00
ETHYLENE GLYCOL	107211	0.00E+00
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00
ETHYLENE THIOUREA	96457	0.00E+00
Fluorides	1101	0.00E+00
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00
FORMALDEHYDE	50000	0.00E+00
GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLOROBENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta-HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) values also apply to:	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITROSO-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00

NAPTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00		
NICKEL AND COMPOUNDS ² (values also apply to:)	7440020	0.00E+00		
Nickel acetate ²	373024	0.00E+00		
Nickel carbonate ²	3333673	0.00E+00		
Nickel carbonyl ²	13463393	0.00E+00		
Nickel hydroxide ²	12054487	0.00E+00		
Nickelocene ²	1271289	0.00E+00		
NICKEL OXIDE ²	1313991	0.00E+00		
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00		
Nickel subsulfide ²	12035722	0.00E+00		
NITRIC ACID	7697372	0.00E+00		
NITROGEN DIOXIDE	10102440	0.00E+00		
p-NITROSODIPHENYLAMINE	156105	0.00E+00		
OZONE	10028156	0.00E+00		
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	4.00E-02	5.63E+01	1.51E-02
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00		
PHENOL	108952	0.00E+00		
PHOSGENE	75445	0.00E+00		
PHOSPHINE	7803512	0.00E+00		
PHOSPHORIC ACID	7664382	0.00E+00		
PHTHALIC ANHYDRIDE	85449	0.00E+00		
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00		
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B[a]P-EQUIV ²)	50328	0.00E+00		
NAPHTHALENE	91203	0.00E+00		
POTASSIUM BROMATE	7758012	0.00E+00		
1,3-PROPANE SULTONE	1120714	0.00E+00		
PROPYLENE (PROPENE)	115071	0.00E+00		
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00		
PROPYLENE OXIDE	75569	0.00E+00		
SELENIUM AND COMPOUNDS	7782492	0.00E+00		
HYDROGEN SELENIDE	7783075	0.00E+00		
Selenium sulfide	7446246	0.00E+00		
SILICA (Crystalline, Respirable)	7631869	0.00E+00		
SODIUM HYDROXIDE	1310732	0.00E+00		
STYRENE	100425	0.00E+00		
SULFATES	9960	0.00E+00		
SULFUR DIOXIDE	7446095	0.00E+00		
SULFURIC ACID	7664939	0.00E+00		
SULFUR TRIOXIDE	7446719	0.00E+00		
OLEUM	8014957	0.00E+00		
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00		
THIOACETAMIDE	62555	0.00E+00		
TOLUENE	108883	0.00E+00		
Toluene diisocyanates	26471625	0.00E+00		
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00		
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00		
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00		
TRICHLOROETHYLENE	79016	0.00E+00		
TRIETHYLAMINE	121448	0.00E+00		
URETHANE (Ethyl carbamate)	51796	0.00E+00		
Vanadium Compounds	7440622	0.00E+00		
Vanadium (fume or dust)	7440622	0.00E+00		
VANADIUM PENTOXIDE	1314621	0.00E+00		
VINYL ACETATE	108054	0.00E+00		
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00		
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00		
XYLENES (mixed isomers)	1330207	0.00E+00		
m-XYLENE	108383	0.00E+00		
o-XYLENE	95476	0.00E+00		
p-XYLENE	106423	0.00E+00		

TOTAL UNADJUSTED Risk Values 56.267 0.015 0.076

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

CoreSite

Mitigated operation (11 hrs)

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Hazard	Adjusted Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0		0
5	16.4	1.000		0		0		0
10	32.8	1.000		0		0		0
15	49.2	1.000		0		0		0
20	65.6	1.000		0		0		0
25	82.0	0.85		0		0		0
30	98.4	0.73		0		0		0
35	114.8	0.64		0		0		0
40	131.2	0.58		0		0		0
50	164.0	0.5		0		0		0
60	196.9	0.41		0		0		0
70	229.7	0.31		0		0		0
80	262.5	0.28		0		0		0
90	295.3	0.25		0		0		0
100	328.1	0.22		0		0		0
110	360.9	0.18		0		0		0
115	377.3	0.17	56.267	9.565	0.015	0.003	0.076	0.013
120	393.7	0.16		0		0		0
130	426.5	0.15		0		0		0
140	459.3	0.14		0		0		0
150	492.1	0.12		0		0		0
160	524.9	0.1		0		0		0
180	590.6	0.09		0		0		0
200	656.2	0.08		0		0		0
220	721.8	0.07		0		0		0
240	787.4	0.06		0		0		0
260	853.0	0.05		0		0		0
280	918.6	0.04		0		0		0

*Distance to MEI: 375 feet

9/17/2020

MOBILE SOURCE HEALTH RISK – YR2014

RECEPTOR ID: 37.376761 -121.968036

	Type	Risk
Cancer per million	Highway	15.763
	Major Street	18.754
	Rail	13.947
PM2.5 (ug/m3)	Highway	0.352
	Major Street	0.404
	Rail	0.026

METHOD/DATA

Cancer risk and PM2.5 were modeled in AERMOD for all highways/freeways and roadways >30,000 AADT (annual average daily traffic) and rail in 20 x 20 meter grid cells. The files incorporate AADT for that highway using EMFAC 2014 data for fleet mix and includes OEHHA's 2015 Air Toxics Hot Spots Guidance methods.

The Air District assigned vehicle counts on each link using information from the California Department of Transportation (Caltrans) and the Metropolitan Transportation Commission (MTC) for all roads with greater than 30,000 AADT. Traffic counts for state highways are from 2014 while surface streets AADT reflect 2015 counts when available, with older counts from 2010 through 2013 if data were missing. Sources of data used for the activity data are described below.

- State highway activity on the state highway system was represented using 2014 AADT counts from Caltrans. AADT values represent the total traffic volume for the year divided by 365 days, and these counts are reported for state highway segments defined using milepost values. Caltrans provides AADT data for total traffic and for trucks only, with trucks classified by axle number (the two-axle class excludes pickups and vans with only 4 tires).
- Daily traffic counts on surface streets were obtained from Metropolitan Transportation Commission (MTC) which receives roadway counts from local agencies as part of the Highway Performance Monitoring System (HPMS) with the exception of Santa Rosa, which posts the AADT on their web page.
- Year 2014 traffic volumes were forecast to 2017 using county-level growth factors from the California Air Resources Board's (ARB) EMFAC2014 mobile source emissions model. EMFAC2014 was run for all Bay Area counties for 2014, and vehicle miles of travel (VMT) output data were used to calculate the growth factors needed to project 2014 traffic volumes to 2017.

THRESHOLDS OF SIGNIFICANCE BASED ON CEQA GUIDANCE:

Local community risk and hazard impacts are associated with Toxic Air Contaminants (TACs) and fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less (PM_{2.5}) because emissions of these pollutants can have significant health impacts at the local level. If emissions of TACs or PM_{2.5} exceed any of the Thresholds of Significance, a project would result in a significant impact.

	SIGNIFICANCE THRESHOLD
CANCER	10 in a million
AMBIENT PM2.5	0.3 ug/m ³