

APPENDIX B:  
CONSTRUCTION HEALTH RISK  
ASSESSMENT





## Health Risk Assessment Background and Modeling Data

# 1. Construction Health Risk Assessment

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## 1.1 INTRODUCTION

Prospect Venture LLC (the project applicant) proposes to redevelop the existing commercial uses at 1655 South De Anza Boulevard with a mixed-use project (proposed project) that would involve the construction of a multi-family and townhome residential units with commercial space. The 1.68-acre project site is bounded by commercial land uses to the north, South De Anza Boulevard to the east, commercial land uses and Prospect Road to the south, and residential uses to the west. The project site is currently developed with a commercial building and associated access road, parking, and landscaping. The proposed project would involve demolishing the existing building and redeveloping the site with a mixed-use commercial and residential development consisting of 11 three-story townhouses and one three-story multi-family residential building with 23 units, a ground floor parking garage, and ground floor commercial space, with associated amenities, infrastructure, and landscaping. The following provides the background methodology used for the construction health risk assessment for the proposed project.

The latest version of the Bay Area Air Quality Management District (BAAQMD) CEQA Air Quality Guidelines requires projects to evaluate the impacts of construction activities on sensitive receptors (BAAQMD, 2017). Project construction is anticipated to take place starting in September 2022 and be completed by February 2024 (approximately 16 months). The nearest sensitive receptors to the project site include the single-family residences to the west. Additional sensitive receptors within 1,000 feet of the site are the residents to the south across Prospect Road, preschool children at Growing Tree Learning Center, approximately 270 feet to the southeast, children at Christian Righteousness Education Center (CREC) approximately 450 feet to the southeast, De Anza Boulevard KinderCare approximately 500 feet to the north, and Bright Horizon at Silicon Valley approximately 1,000 feet to the northeast. The BAAQMD has developed *Screening Tables for Air Toxics Evaluation During Construction* (2017) that evaluate construction-related health risks associated with residential, commercial, and industrial projects. According to the screening tables, the receptors are closer than the distance of 100 meters (328 feet) that would screen out potential health risks and, therefore, could be potentially impacted from the proposed construction activities. As a result, a site-specific construction health risk assessment (HRA) has been prepared for the proposed project. This HRA considers the health impact to off-site sensitive receptors (i.e., children at the nearby residences and childcare facilities) from construction emissions at the project site, including diesel equipment exhaust (diesel particulate matter or DPM) and particulate matter less than 2.5 microns (PM<sub>2.5</sub>).

## 1.2 METHODOLOGY AND SIGNIFICANCE THRESHOLDS

For this HRA, the BAAQMD significance thresholds were deemed to be appropriate and the thresholds that were used for this project are shown below:

- Excess cancer risk of more than 10 in a million
- Non-cancer hazard index (chronic or acute) greater than 1.0
- Incremental increase in average annual PM<sub>2.5</sub> concentration of greater than 0.3 µg/m<sup>3</sup>

The methodology used in this HRA is consistent with the following BAAQMD and the OEHHA guidance documents:

- BAAQMD, 2017. *California Environmental Quality Act (CEQA) Air Quality Guidelines*. May 2017.
- BAAQMD, 2016. *Planning Healthy Places*. May 2016.
- BAAQMD, 2010. *Screening Tables for Air Toxics Evaluation During Construction*. May 2010.
- BAAQMD, 2012. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. Version 3.0. May 2012.
- OEHHA. 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments*. February 2015.

Potential exposures to DPM and PM<sub>2.5</sub> from proposed project construction were evaluated for off-site sensitive receptors in close proximity to the site. Pollutant concentrations were estimated using an air dispersion model, and excess lifetime cancer risks and chronic non-cancer hazard indexes were calculated. These risks were then compared to the significance thresholds adopted for this HRA.

It should be noted that these health impacts are based on conservative (i.e., health protective) assumptions. The United States Environmental Protection Agency (USEPA, 2005) and the Office of Environmental Health Hazard Assessment (OEHHA, 2015) note that conservative assumptions used in a risk assessment are intended to ensure that the estimated risks do not underestimate the actual risks. Therefore, the estimated risks may not necessarily represent actual risks experienced by populations at or near a site. The use of conservative assumptions tends to produce upper-bound estimates of exposure and thus risk.

For residential-based receptors, the following conservative assumptions were used:

- It was assumed that maximum-exposed off-site residential receptors (both children and adults) stood outdoors and are subject to DPM at their residence for 8 hours per day for the duration of construction. In reality, California residents typically will spend on average 2 hours per day outdoors at their residences (USEPA, 2011). This would result in lower exposures to construction related DPM emissions and lower estimated risk values.
- The calculated risk for infants from third trimester to age 2 is multiplied by a factor of 10 to account for early life exposure and uncertainty in child versus adult exposure impacts (OEHHA, 2015).

For preschool children, the following conservative assumptions were used:

- It was assumed that maximum exposed receptor (preschool child) stood outside and are subject to DPM for 8 hours per weekday for the duration of construction.

The calculated risk for children age 6 weeks to 2 is multiplied by a factor of 10, and children age 2 to age 9 is multiplied by a factor of 3 to account for early life exposure and uncertainty in child versus adult exposure impacts (OEHHA, 2015)

## 1.3 CONSTRUCTION EMISSIONS

Construction emissions were calculated as average daily emissions in pounds per day, using the proposed construction schedule and the latest version of California Emissions Estimation Model, known as CalEEMod Version 2020.4 (CAPCOA, 2021). DPM emissions were based on the CalEEMod construction runs, using annual exhaust PM<sub>10</sub> construction emissions presented in pounds (lbs) per day. The PM<sub>2.5</sub> emissions were taken from the CalEEMod output for exhaust PM<sub>2.5</sub> also presented in lbs per day.

The City of Cupertino's Municipal Code (CMC) Section 17.04, *Standard Environmental Protection Requirements*, identifies environmental protection standards that all construction projects must meet, including but not limited to environmental mitigation measures identified in any environmental documents required as part of a General Plan update. These requirements apply to every project within the city and are demonstrated through the submittal of construction management or permit plans prior to issuance of permits.

The following CMC section is applicable to the project:

CMC Section 17.04.050, A.2, *Control Construction Exhaust*. Projects that disturb more than one-acre and are more than two months in duration, shall implement the following measures and the project applicant shall include them in the applicable construction document, prior to issuance of the first permit:

- Utilize off-road diesel-powered construction equipment that is rated by the U.S. Environmental Protection Agency (EPA) as Tier 4 or higher for equipment more than 25 horsepower. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Tier 4 interim emissions standard for a similarly sized engine, as defined by the California Air Resources Board's (CARB) regulations. Applicable construction documents shall clearly show the selected emission reduction strategy for construction equipment over 25 horsepower.
- Ensure that the construction contractor shall maintain a list of all operating equipment in use on the project site for verification by the City. The construction equipment list shall state the makes, models, and number of construction equipment on-site.
- Ensure that all equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations.

Per CMC Section 17.04.050, Tier 4 Interim emissions standards are required for off-road diesel-powered construction equipment with more than 25 horsepower (hp) and were included in the construction emissions modeling. The project was assumed to take place over 16 months (375 workdays) from September 2022 to February 2024. The average daily emission rates from construction equipment were determined by dividing the annual average on-site emissions for each construction year by the number of construction days per year for each calendar year of construction (i.e., 2022, 2023 and 2024). The off-site hauling emission rates were adjusted to evaluate localized emissions from the 0.43-mile haul route within 1,000 feet of the project site. The CalEEMod construction emissions output and emission rate calculations are provided in Appendix A of the HRA.

## 1.4 DISPERSION MODELING

Air quality modeling was performed using the AERMOD atmospheric dispersion model to assess the impact of emitted compounds on sensitive receptors near the project. The model is a steady state Gaussian plume model and is an approved model by BAAQMD for estimating ground level impacts from point and fugitive sources in simple and complex terrain. The on-site construction emissions for the project were modeled as poly-area sources. The off-site mobile sources were modeled as adjacent line volume sources. The model requires additional input parameters, including chemical emission data and local meteorology. Inputs for the construction emission rates are those described in Section 1.3. Meteorological data obtained from the BAAQMD for the nearest representative meteorological station (N.Y. Mineta San Jose International Airport) with the five latest available years (2009 to 2013) of record were used to represent local weather conditions and prevailing winds.

The modeling analysis also considered the spatial distribution and elevation of each emitting source in relation to the sensitive receptors. To accommodate the model's Cartesian grid format, direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for each source location. In addition, digital elevation model (DEM) data for the area were obtained and included in the model runs to account for complex terrain. An emission release height of 4.15 meters was used as representative of the stack exhaust height for off-road construction equipment and diesel truck traffic, and an initial vertical dispersion parameter of 1.93 m was used, per California Air Resources Board (CARB) guidance (2000).

To determine contaminant impacts during construction hours, the model's Season-Hour-Day (HRDOW) scalar option was invoked to predict flagpole-level concentrations (1.5 m for ground floor receptors) for construction emissions generated between the hours of 7:00 AM and 4:00 PM with a 1-hour lunch break.

A unit emission rate of 1 gram per second was used for the air dispersion model to represent both DPM and PM<sub>2.5</sub> construction emissions. The unit emission rates were proportioned over the poly-area sources for on-site construction emissions and divided between the volume sources for off-site hauling emissions. The maximum modeled concentrations from the output files were then multiplied by the emission rates calculated in Appendix A to obtain the maximum flagpole-level concentrations at the off-site maximum exposed individual resident (MEIR). The MEIR is the single-family residence immediately west of the site on Jamestown Drive. The maximum exposed childcare receptor is at Growing Tree Learning Center at the southeastern corner of Prospect Road and South De Anza Boulevard. The MEIR and the maximum exposed childcare receptor location are shown on Figure 1, *Project Sources and Off-Site Receptor Locations*.

The air dispersion model output is presented in Appendix B. The DPM and PM<sub>2.5</sub> concentrations at the MEIR and maximum exposed childcare receptor are provided in Appendix C.

## 1.5 RISK CHARACTERIZATION

### 1.5.1 Carcinogenic Chemical Risk

A threshold of ten in a million ( $10 \times 10^{-6}$ ) has been established as a level posing no significant risk for exposures to carcinogens. Health risks associated with exposure to carcinogenic compounds can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. The cancer risk probability is determined by multiplying the chemical's annual concentration by its cancer potency factor (CPF), a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation pathway. It is an upper-limit estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter ( $\mu\text{g}/\text{m}^3$ ) over a lifetime of 70 years.

Recent guidance from OEHHA recommends a refinement to the standard point estimate approach with the use of age-specific breathing rates and age sensitivity factors (ASFs) to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose for each age group. Once determined, contaminant dose is multiplied by the cancer potency factor in units of inverse dose expressed in milligrams per kilogram per day ( $\text{mg}/\text{kg}/\text{day}$ )<sup>-1</sup> to derive the cancer risk estimate. Therefore, to accommodate the unique exposures associated with the sensitive receptors, the following dose algorithm was used.

$$\text{Dose}_{\text{AIR,per age group}} = (\text{C}_{\text{air}} \times \text{EF} \times [\frac{\text{BR}}{\text{BW}}] \times \text{A} \times \text{CF})$$

Where:

Dose <sub>AIR</sub>	=	dose by inhalation ( $\text{mg}/\text{kg}\text{-day}$ ), per age group
C <sub>air</sub>	=	concentration of contaminant in air ( $\mu\text{g}/\text{m}^3$ )
EF	=	exposure frequency (number of days/365 days)
BR/BW	=	daily breathing rate normalized to body weight ( $\text{L}/\text{kg}\text{-day}$ )
A	=	inhalation absorption factor (default = 1)
CF	=	conversion factor ( $1 \times 10^{-6}$ , $\mu\text{g}$ to $\text{mg}$ , $\text{L}$ to $\text{m}^3$ )

The inhalation absorption factor (A) is a unitless factor that is only used if the cancer potency factor included a correction for absorption across the lung. The default value of 1 was used for this assessment. For residential receptors, the exposure frequency (EF) of 0.96 is used to represent 350 days per year to allow for a two-week period away from home each year (OEHHA, 2015). For childcare receptors at the various preschool and day care facilities, an EF of 0.72 is used to represent 250 days per year for workplace receptors (OEHHA, 2015).

For construction analysis, the exposure duration spans the length of construction (e.g., 375 work days, approximately 1.44 years). As the length of construction is less than 2 years, only the third trimester and 0-2 age bins apply to the construction analysis for the off-site residential receptors. For residential receptors, the

95<sup>th</sup> percentile daily breathing rates (BR/BW), exposure duration (ED), age sensitivity factors (ASFs), and fraction of time at home (FAH) for the various age groups are provided herein:

<u>Age Groups</u>	<u>BR/BW (L/kg-day)</u>	<u>ED</u>	<u>ASF</u>	<u>FAH</u>
Third trimester	361	0.25	10	0.85
0-2 age group	1,090	1.2	10	0.85

For preschool children at the four nearby childcare facilities, the 95th percentile 8-hour breathing rates (moderate intensity activity), ED, and ASF for the 0 to 2 and 2 to 9-year-old age group is provided herein:

<u>Age Groups</u>	<u>BR/BW (L/kg-day)</u>	<u>ED</u>	<u>ASF</u>
0-2 age group	1,200	0.5 Green Tree	10
		1.44 De Anza Blvd KinderCare	
		1.44 Bright Horizon	
2-9 age group	640	0.94 Green Tree	3
		1.44 CREC	

The ED's for the four childcare facilities vary depending on the earliest age children can attend. For example, infants 6 weeks and older can attend De Anza Boulevard KinderCare and Bright Horizon at Silicon Valley. Thus, the 0 to 2-year OEHHA age bin was used for these filters to cover the entire 1.44-year construction duration. The 0 to 2-year and 2 to 9-year OEHHA age bins were used for Growing Tree Learning Center since children ages 18 months to 6 years may attend. Children ages 5 to 10 attend programs at the Christian Righteousness Education Center. Thus, the 2 to 9 OEHHA age bin was used for CREC.

To calculate the overall cancer risk, the risk for each appropriate age group is calculated per the following equation:

$$\text{Cancer Risk}_{\text{AIR}} = \text{Dose}_{\text{AIR}} \times \text{CPF} \times \text{ASF} \times \text{FAH} \times \frac{\text{ED}}{\text{AT}}$$

Where:

Dose <sub>AIR</sub>	=	dose by inhalation (mg/kg-day), per age group
CPF	=	cancer potency factor, chemical-specific (mg/kg-day) <sup>-1</sup>
ASF	=	age sensitivity factor, per age group
FAH	=	fraction of time at home, per age group (for residential receptors only)
ED	=	exposure duration (years)
AT	=	averaging time period over which exposure duration is averaged (70 years)

The CPFs used in the assessment were obtained from OEHHA guidance. The excess lifetime cancer risks during the construction period to the maximally exposed resident were calculated based on the factors provided above. The cancer risks for each age group are summed to estimate the total cancer risk for each toxic chemical species. The final step converts the cancer risk in scientific notation to a whole number that expresses the cancer risk in "chances per million" by multiplying the cancer risk by a factor of 1x10<sup>6</sup> (i.e. 1 million). The calculated results are provided in Appendix C.

## **1.5.2 Non-Carcinogenic Hazards**

An evaluation was also conducted of the potential non-cancer effects of chronic chemical exposures. Adverse health effects are evaluated by comparing the annual receptor level (flagpole) concentration of each chemical compound with the appropriate reference exposure limit (REL). Available RELs promulgated by OEHHA were considered in the assessment.

The hazard index approach was used to quantify non-carcinogenic impacts. The hazard index assumes that chronic sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). Target organs presented in regulatory guidance were used for each discrete chemical exposure. To calculate the hazard index, each chemical concentration or dose is divided by the appropriate toxicity value. This ratio is summed for compounds affecting the same toxicological endpoint. A health hazard is presumed to exist where the total equals or exceeds one.

The chronic hazard analysis for DPM is provided in Appendix C. The calculations contain the relevant exposure concentrations and corresponding reference dose values used in the evaluation of non-carcinogenic exposures.

## **1.5.3 Criteria Pollutants**

The BAAQMD has recently incorporated PM<sub>2.5</sub> into the District's CEQA significance thresholds due to recent studies that show adverse health impacts from exposure to this pollutant. An incremental increase of greater than 0.3 µg/m<sup>3</sup> for the annual average PM<sub>2.5</sub> concentration is considered to be a significant impact.

## 1.6 CONSTRUCTION HRA RESULTS

The calculated results are provided in Appendix C and the results are summarized in Table 1.

TABLE 1. CONSTRUCTION RISK SUMMARY

Receptor	Cancer Risk (per million)	Chronic Hazards	PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )
Maximum Exposed Individual Resident (MEIR)	6.3	0.019	0.04
Growing Tree Learning Center	1.1	0.009	0.02
Christian Righteousness Education Center	0.3	0.006	0.01
De Anza Boulevard KinderCare	0.3	0.001	0.002
Bright Horizons at Silicon Valley	0.3	0.001	0.002
BAAQMD Threshold	10	1.0	0.30
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>

Note: Modeling includes CMC Section 17.04.050 requirements for the use of Tier 4 Interim equipment for diesel-fueled engines 25 horsepower and higher.

Cancer risk for the residential MER from project-related construction emissions was calculated to be 6.3 in a million, which would not exceed the 10 in a million significance threshold. In accordance with the latest 2015 OEHHA guidance, the calculated total cancer risk conservatively assumes that the risk for the residential MER consists of a pregnant woman in the third trimester that subsequently gives birth to an infant during the approximately 16-month construction period; therefore, all calculated residential risk values were multiplied by a factor of 10. In addition, it was conservatively assumed that the residents were outdoors 8 hours a day, 260-262 construction days per year and exposed to all of the daily construction emissions. The cancer risk for the maximum exposed preschool receptor (at Growing Tree Learning Center) and the other childcare facilities were calculated to be less than the significance threshold of 10 in a million.

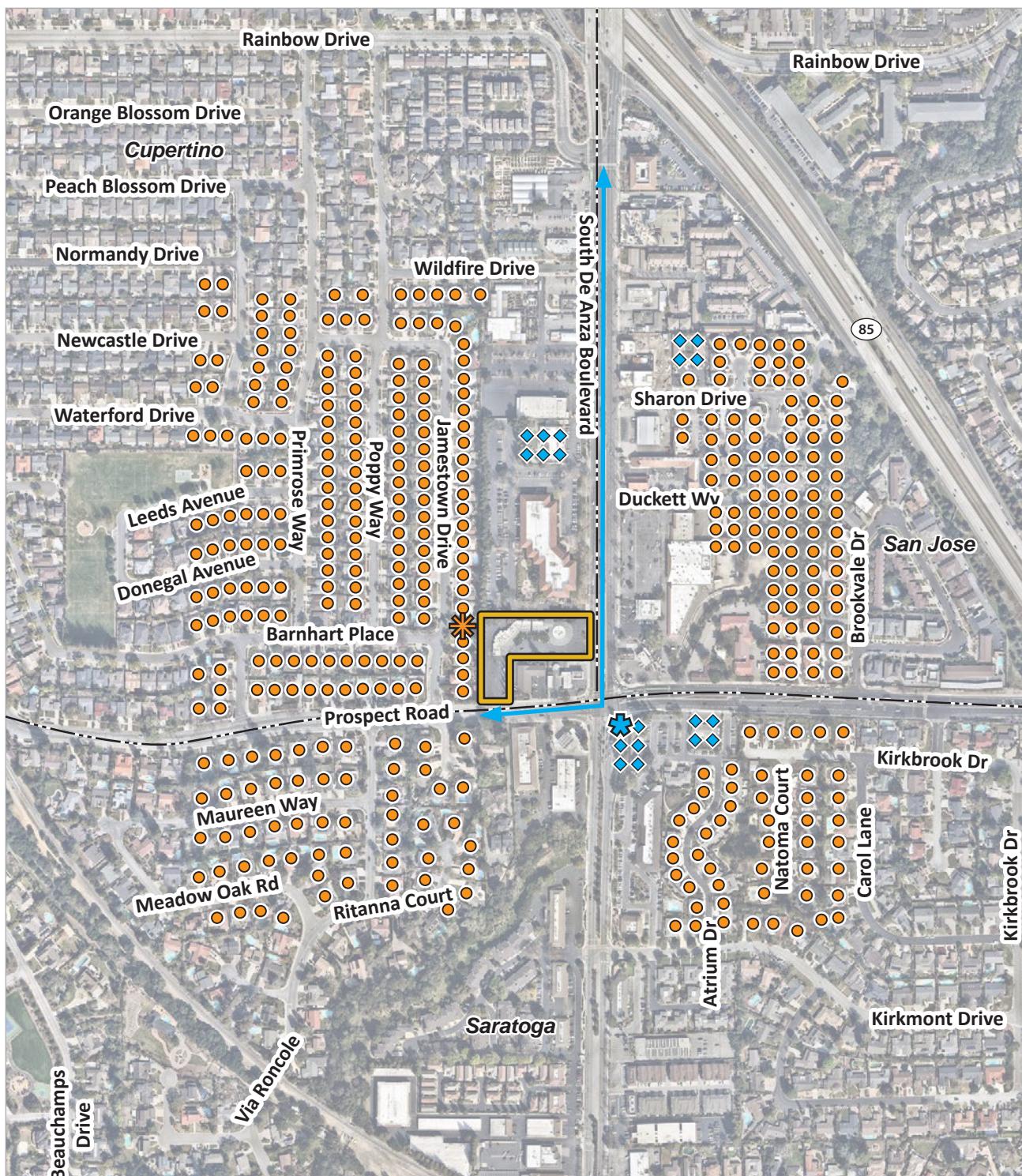
For non-carcinogenic effects, the chronic hazard index identified for each toxicological endpoint totaled less than one for all the off-site sensitive receptors. Therefore, chronic non-carcinogenic hazards are within acceptable limits. Additionally, the maximum annual PM<sub>2.5</sub> concentrations would not exceed the BAAQMD significance threshold of 0.3 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) for all off-site sensitive receptors.

As noted in Section 1.3, CMC Section 17.04 requirements were included in the construction modeling used to determine the health risks provided in Table 1. The results indicate that in accordance with CMC Section 17.04 requirements, excess cancer risk would be less than the BAAQMD's significance thresholds for the MEIR and maximum exposed preschool receptor or additional childcare receptors. The project would not expose off-site sensitive receptors to substantial concentrations of air pollutant emissions during construction and impacts would be less than significant.

## 2. References

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- Bay Area Air Quality Management District. 2017. *California Environmental Quality Act Air Quality Guidelines*.
- \_\_\_\_\_. 2016. *Planning Healthy Places*. Dated May 2016.
- \_\_\_\_\_. 2012. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. Version 3.0. Dated May 2012.
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- \_\_\_\_\_. 2009-2013. Meteorological Data Set for N.Y. Mineta San Jose International Airport.
- California Air Pollution Control Officers Association (CAPCOA). 2021. California Emissions Estimator Model (CalEEMod). Version 2020.4. Prepared by: ENVIRON International Corporation and the California Air Districts.
- California Air Resources Board (CARB). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*.
- \_\_\_\_\_. 2022. *Meteorological Files*. <https://ww2.arb.ca.gov/resources/documents/harp-aermod-meteorological-files>
- Office of Environmental Health Hazard Assessment (OEHHA). 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments*. Dated February 2015.
- United States Environmental Protection Agency (USEPA). 2011. *Exposure Factors Handbook 2011 Edition (Final)*. EPA/600/R-09/052F, 2011.
- \_\_\_\_\_. 2005. *Guideline on Air Quality Models* (Revised). EPA-450/2-78-027R.



Source: © Nearmap, imagery date 2/28/2022.

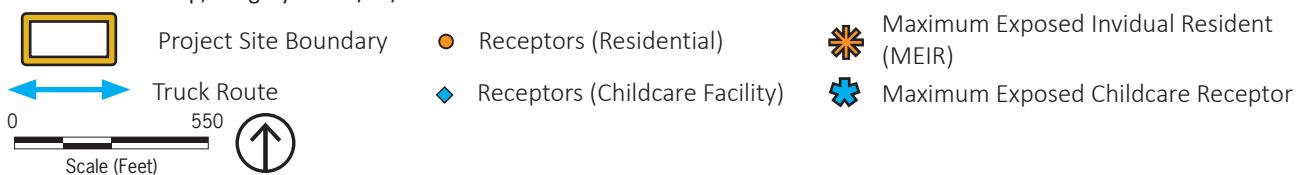


Figure 1  
Project Site and Offsite Receptor Locations

## **Appendix A. Emission Rate Calculations**

## Criteria Air Pollutant Emissions Summary - Construction

Annual emissions divided by total construction duration to obtain average daily emissions. Average construction emissions accounts for the duration of each construction phase and the time each construction equipment is onsite.

### Total Construction

Days	2022	2023	2024
375	72	258	45

### Calendar Days

534

### Run - with Best Control Measures for Fugitive Dust

	average lbs/day	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5
Total		3	11	17	0	0.89	0.15	1	0.34	0.14
BAAQMD Threshold		54	54	NA	NA	BMP	82	54	BMP	54
Exceeds Threshold		No	No	NA	NA	NA	No	No	NA	No

## Average Daily Emissions and Emission Rates

Onsite Construction PM10 Exhaust Emissions <sup>1</sup>			
Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2022	0.05	6.08E-03	7.66E-04
2023	0.16	1.98E-02	2.50E-03
2024	0.17	2.17E-02	2.73E-03

Onsite Construction PM2.5 Exhaust Emissions <sup>2</sup>			
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
	0.05	6.08E-03	7.66E-04
	0.16	1.98E-02	2.50E-03
	0.17	2.17E-02	2.73E-03

Note: Emissions evenly distributed over 43 modeled volume sources.

Offsite Construction PM10 Exhaust Emissions <sup>1</sup>				Offsite Construction PM2.5 Exhaust Emissions <sup>2</sup>				
Year	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day) <sup>3</sup>	Emission Rate (lbs/hr)	Emission Rate (g/s)	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day) <sup>3</sup>	Emission Rate (lbs/hr)	Emission Rate (g/s)
2022	8.33E-03	1.78E-04	2.22E-05	2.80E-06	8.06E-03	1.72E-04	2.15E-05	2.71E-06
2023	5.27E-03	1.12E-04	1.41E-05	1.77E-06	4.96E-03	1.06E-04	1.32E-05	1.67E-06
2024	5.78E-03	1.23E-04	1.54E-05	1.94E-06	5.33E-03	1.14E-04	1.42E-05	1.79E-06

Hauling Length (miles)

20 miles

Year Workdays Construction Duration<sup>5</sup>

Haul Length within 1,000 ft of Site (mile)<sup>3</sup>

0.43 miles

2022 72 0.28

Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks)<sup>4</sup>

8 hours

2023 258 0.99

2024 45 0.17

<sup>1</sup> DPM emissions taken as PM<sub>10</sub> exhaust emissions from CalEEMod average daily emissions.

<sup>2</sup> PM<sub>2.5</sub> emissions taken as PM<sub>2.5</sub> exhaust emissions from CalEEMod average daily emissions.

<sup>3</sup> Emissions from CalEEMod offsite average daily emissions, which is based on proportioned haul truck trip distances, are adjusted to evaluate emissions from the 0.43-mile route within 1,000 of the project site.

<sup>4</sup> Work hours applied in By Hour/Day (HRDOW) variable emissions module in air dispersion model (see App B - Air Dispersion Model Output).

<sup>5</sup> Construction duration scalars determined for each year of construction to adjust receptor exposures to the exposure durations for each modeled construction year (see App C - Risk Calculations).

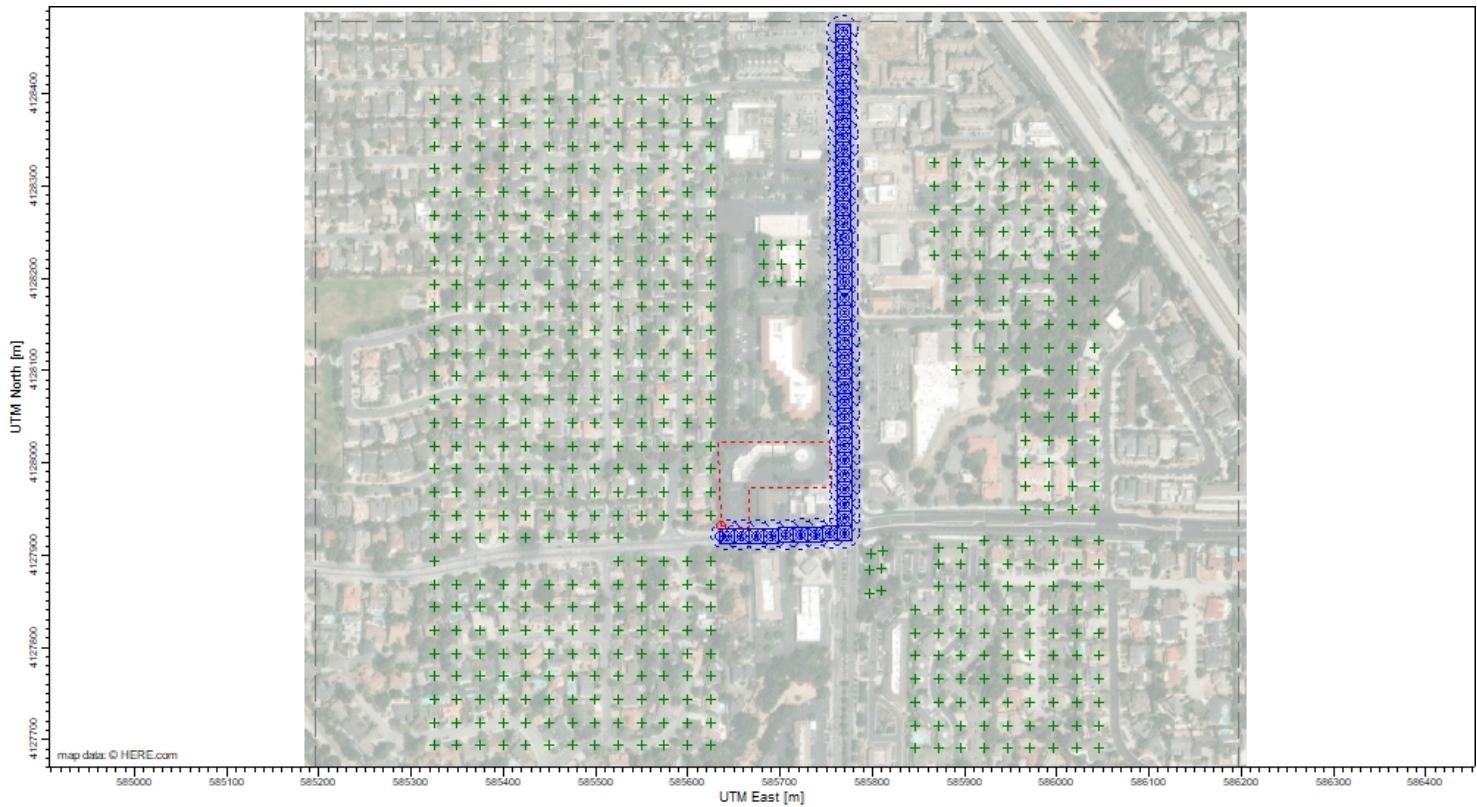
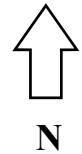
## **Appendix B. Air Dispersion Model Output**

## Air Dispersion Model Setup

Polyarea Source: On-site Construction Emissions

Adjacent Line Volume Sources: Haul Route

Receptors for residences and childcare facilities within approx. 1,000 feet of project site



# Control Pathway

AERMOD

## Dispersion Options

### Titles

1655 S. De Anza Blvd, Cupertino, CA  
Construction HRA

### Dispersion Options

Regulatory Default

Non-Default Options

### Dispersion Coefficient

Urban

Population:  
Name (Optional):  
Roughness Length:

### Output Type

- Concentration
- Total Deposition (Dry & Wet)
- Dry Deposition
- Wet Deposition

### Plume Depletion

- Dry Removal
- Wet Removal

### Output Warnings

- No Output Warnings
- Non-fatal Warnings for Non-sequential Met Data

## Pollutant / Averaging Time / Terrain Options

### Pollutant Type

### Exponential Decay

Half-life of 4 hours will be used

### Averaging Time Options

Hours  1  2  3  4  6  8  12  24

Month  Period  Annual

### Terrain Height Options

Flat

Elevated

SO: Meters

RE: Meters

TG: Meters

### Flagpole Receptors

Yes  No

Default Height = 1.50 m

# Control Pathway

AERMOD

## Optional Files



Re-Start File



Init File



Multi-Year Analyses



Event Input File



Error Listing File

## Detailed Error Listing File

Filename: COCU22.err

# Source Pathway - Source Inputs

AERMOD

## Polygon Area Sources

Source Type: AREA POLY

Source: PAREA1 (onsite)

Base Elevation (Optional)	Release Height [m]	Emission Rate [g/ (s-m^2)]	Initial Vertical Dim. [m]	Number of Vertices (or sides)	X Coordinate for Vertices [m]	Y Coordinate for Vertices [m]
95.08	4.15	0.00014	1.93	6	585635.34	4127930.83
		0.00014			585666.12	4127930.45
		0.00014			585665.74	4127973.78
		0.00014			585755.06	4127973.78
		0.00014			585753.54	4128022.05
		0.00014			585632.68	4128021.67

## Line Volume Sources

Source Type: LINE VOLUME

Source: SLINE1 (haul)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
16.00	1.00000		585634.59	4127920.88	94.90	4.15
			585690.30	4127920.88	94.08	4.15
			585770.63	4127923.47	92.79	4.15
			585768.04	4128474.10	89.20	4.15

# Source Pathway - Source Inputs

AERMOD

## Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000001	585642.59	4127920.88	94.82	4.15	0.02326	16.00		7.44	3.26
	L0000002	585658.59	4127920.88	94.52	4.15	0.02326	16.00		7.44	3.26
	L0000003	585674.59	4127920.88	94.27	4.15	0.02326	16.00		7.44	3.26
	L0000004	585690.59	4127920.89	94.07	4.15	0.02326	16.00		7.44	3.26
	L0000005	585706.58	4127921.40	93.74	4.15	0.02326	16.00		7.44	3.26
	L0000006	585722.57	4127921.92	93.44	4.15	0.02326	16.00		7.44	3.26
	L0000007	585738.57	4127922.43	93.18	4.15	0.02326	16.00		7.44	3.26
	L0000008	585754.56	4127922.95	93.06	4.15	0.02326	16.00		7.44	3.26
	L0000009	585770.55	4127923.47	92.94	4.15	0.02326	16.00		7.44	3.26
	L0000010	585770.56	4127939.39	92.83	4.15	0.02326	16.00		7.44	3.26
	L0000011	585770.48	4127955.39	92.73	4.15	0.02326	16.00		7.44	3.26
	L0000012	585770.40	4127971.39	92.66	4.15	0.02326	16.00		7.44	3.26
	L0000013	585770.33	4127987.39	92.61	4.15	0.02326	16.00		7.44	3.26
	L0000014	585770.25	4128003.39	92.49	4.15	0.02326	16.00		7.44	3.26
	L0000015	585770.18	4128019.39	92.36	4.15	0.02326	16.00		7.44	3.26
	L0000016	585770.10	4128035.39	92.18	4.15	0.02326	16.00		7.44	3.26
	L0000017	585770.03	4128051.39	91.98	4.15	0.02326	16.00		7.44	3.26
	L0000018	585769.95	4128067.39	91.75	4.15	0.02326	16.00		7.44	3.26
	L0000019	585769.88	4128083.38	91.53	4.15	0.02326	16.00		7.44	3.26
	L0000020	585769.80	4128099.38	91.37	4.15	0.02326	16.00		7.44	3.26
	L0000021	585769.73	4128115.38	91.22	4.15	0.02326	16.00		7.44	3.26
	L0000022	585769.65	4128131.38	91.15	4.15	0.02326	16.00		7.44	3.26
	L0000023	585769.58	4128147.38	91.08	4.15	0.02326	16.00		7.44	3.26
	L0000024	585769.50	4128163.38	91.02	4.15	0.02326	16.00		7.44	3.26

# Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000025	585769.43	4128179.38	90.97	4.15	0.02326	16.00		7.44	3.26
	L0000026	585769.35	4128195.38	90.92	4.15	0.02326	16.00		7.44	3.26
	L0000027	585769.28	4128211.38	90.85	4.15	0.02326	16.00		7.44	3.26
	L0000028	585769.20	4128227.38	90.71	4.15	0.02326	16.00		7.44	3.26
	L0000029	585769.12	4128243.38	90.57	4.15	0.02326	16.00		7.44	3.26
	L0000030	585769.05	4128259.38	90.40	4.15	0.02326	16.00		7.44	3.26
	L0000031	585768.97	4128275.38	90.25	4.15	0.02326	16.00		7.44	3.26
	L0000032	585768.90	4128291.38	90.14	4.15	0.02326	16.00		7.44	3.26
	L0000033	585768.82	4128307.38	90.04	4.15	0.02326	16.00		7.44	3.26
	L0000034	585768.75	4128323.38	89.95	4.15	0.02326	16.00		7.44	3.26
	L0000035	585768.67	4128339.38	89.89	4.15	0.02326	16.00		7.44	3.26
	L0000036	585768.60	4128355.38	89.84	4.15	0.02326	16.00		7.44	3.26
	L0000037	585768.52	4128371.38	89.76	4.15	0.02326	16.00		7.44	3.26
	L0000038	585768.45	4128387.38	89.66	4.15	0.02326	16.00		7.44	3.26
	L0000039	585768.37	4128403.38	89.58	4.15	0.02326	16.00		7.44	3.26
	L0000040	585768.30	4128419.38	89.51	4.15	0.02326	16.00		7.44	3.26
	L0000041	585768.22	4128435.38	89.48	4.15	0.02326	16.00		7.44	3.26
	L0000042	585768.15	4128451.38	89.46	4.15	0.02326	16.00		7.44	3.26
	L0000043	585768.07	4128467.38	89.43	4.15	0.02326	16.00		7.44	3.26

# Source Pathway

AERMOD

## Building Downwash Information

Option not in use

## Emission Rate Units for Output

### For Concentration

Unit Factor: 1E6  
Emission Unit Label: GRAMS/SEC  
Concentration Unit Label: MICROGRAMS/M\*\*3

## Source Groups

Source Group ID: ONSITE	List of Sources in Group (Source Range or Single Sources)
	PAREA1
Source Group ID: HAUL	List of Sources in Group (Source Range or Single Sources)
	SLINE1

## Variable Emissions

# Source Pathway

AERMOD

## Hour-of-Day / Day-of-Week Emission Rate Variation

Scenario: WorkHours

Source ID:		PAREA1					
Weekdays							
Saturday	Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00
		7 - 12	0.00	1.00	1.00	1.00	0.50
		13 - 18	0.50	1.00	1.00	1.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00
Sunday	Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00
		7 - 12	0.00	0.00	0.00	0.00	0.00
		13 - 18	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00
Source ID:		SLINE1					
Weekdays							
Saturday	Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00
		7 - 12	0.00	1.00	1.00	1.00	0.50
		13 - 18	0.50	1.00	1.00	1.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00
Sunday	Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00
		7 - 12	0.00	0.00	0.00	0.00	0.00
		13 - 18	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00

# Meteorology Pathway

AERMOD

## Met Input Data

### Surface Met Data

Filename: ..\NYMinetaSJIntlAirport\_15.5m\724945.SFC  
Format Type: Default AERMET format

### Profile Met Data

Filename: ..\NYMinetaSJIntlAirport\_15.5m\724945.PFL  
Format Type: Default AERMET format

### Wind Speed



Wind Speeds are Vector Mean (Not Scalar Means)

### Wind Direction

Rotation Adjustment [deg]:

### Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 15.50 [m]

### Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface Upper Air		2009 2009			OAKLAND/WSO AP

## Data Period

### Data Period to Process

Start Date: 1/1/2009 Start Hour: 1 End Date: 1/2/2014 End Hour: 24

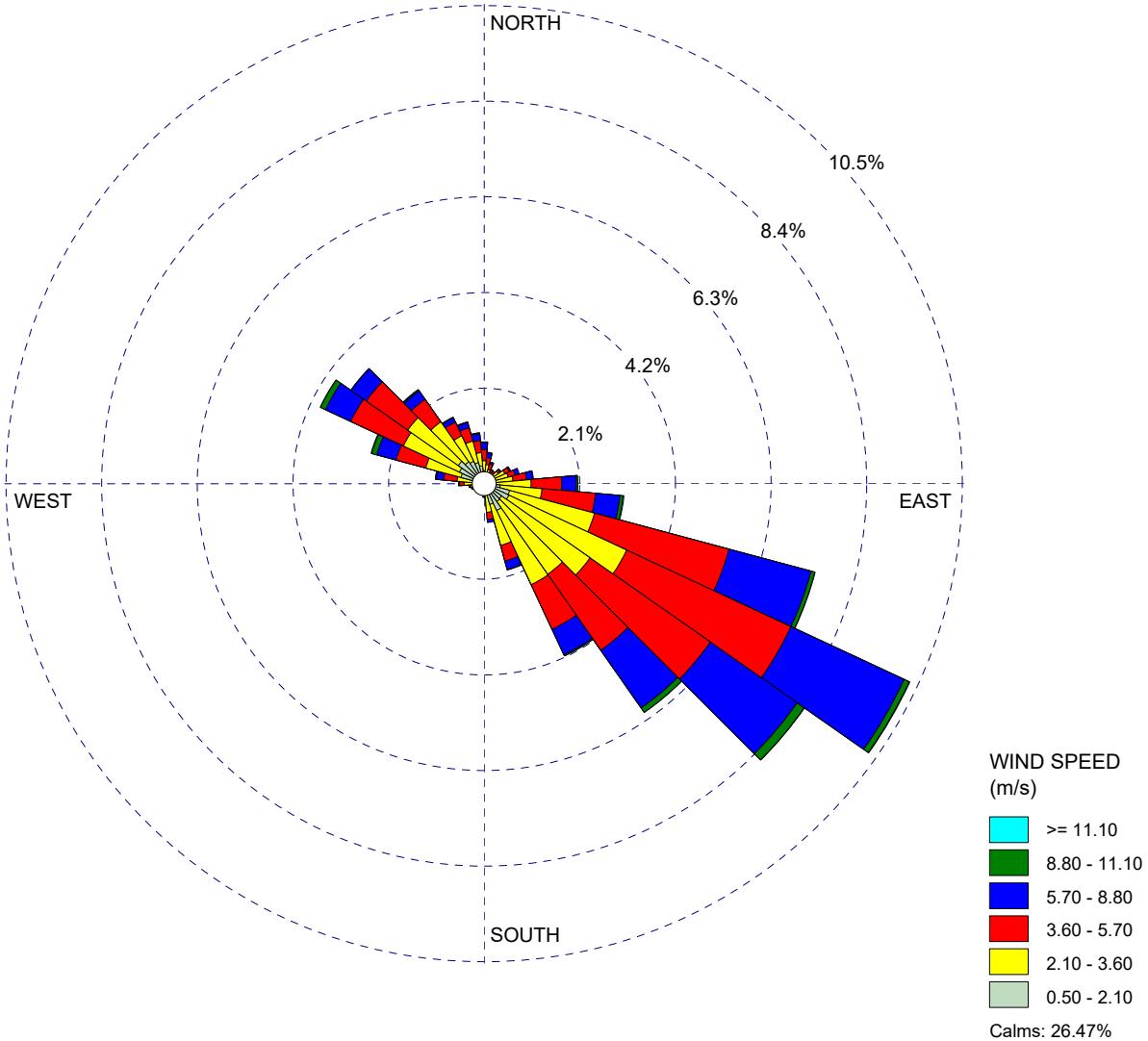
### Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

WIND ROSE PLOT:

**Station #23293**

DISPLAY:

**Wind Speed  
Flow Vector (blowing to)**

COMMENTS:  NY Mineta SJ International Airport 15.5m anem height	DATA PERIOD:  <b>Start Date: 1/1/2009 - 00:00 End Date: 1/2/2014 - 23:59</b>	COMPANY NAME:  <b>PlaceWorks</b>
	MODELER:  <b>SB</b>	
	CALM WINDS:  <b>26.47%</b>	TOTAL COUNT:  <b>42621 hrs.</b>
	AVG. WIND SPEED:  <b>2.94 m/s</b>	DATE:  <b>4/22/2022</b>
		PROJECT NO.:  <b>COCU-22</b>

# Receptor Pathway

AERMOD

## Receptor Networks

Note: Terrain Elevations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)

Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

## Discrete Receptors

### Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	585324.60	4127693.35	UCART1	99.74	
2	585349.60	4127693.35	UCART1	99.33	
3	585374.60	4127693.35	UCART1	98.91	
4	585399.60	4127693.35	UCART1	98.46	
5	585424.60	4127693.35	UCART1	97.91	
6	585449.60	4127693.35	UCART1	97.47	
7	585474.60	4127693.35	UCART1	97.03	
8	585499.60	4127693.35	UCART1	96.17	
9	585524.60	4127693.35	UCART1	95.60	
10	585549.60	4127693.35	UCART1	95.52	
11	585574.60	4127693.35	UCART1	95.26	
12	585599.60	4127693.35	UCART1	95.07	
13	585624.60	4127693.35	UCART1	94.87	
14	585324.60	4127718.35	UCART1	100.05	
15	585349.60	4127718.35	UCART1	99.54	
16	585374.60	4127718.35	UCART1	99.05	
17	585399.60	4127718.35	UCART1	98.60	
18	585424.60	4127718.35	UCART1	98.19	
19	585449.60	4127718.35	UCART1	98.04	
20	585474.60	4127718.35	UCART1	97.58	
21	585499.60	4127718.35	UCART1	96.56	
22	585524.60	4127718.35	UCART1	95.78	
23	585549.60	4127718.35	UCART1	95.84	
24	585574.60	4127718.35	UCART1	95.49	
25	585599.60	4127718.35	UCART1	95.14	
26	585624.60	4127718.35	UCART1	95.21	
27	585324.60	4127743.35	UCART1	100.49	
28	585349.60	4127743.35	UCART1	100.04	
29	585374.60	4127743.35	UCART1	99.59	
30	585399.60	4127743.35	UCART1	99.16	

# Receptor Pathway

AERMOD

31	585424.60	4127743.35	UCART1	98.76
32	585449.60	4127743.35	UCART1	98.49
33	585474.60	4127743.35	UCART1	97.83
34	585499.60	4127743.35	UCART1	96.89
35	585524.60	4127743.35	UCART1	96.11
36	585549.60	4127743.35	UCART1	96.13
37	585574.60	4127743.35	UCART1	95.71
38	585599.60	4127743.35	UCART1	95.26
39	585624.60	4127743.35	UCART1	95.30
40	585324.60	4127768.35	UCART1	100.49
41	585349.60	4127768.35	UCART1	100.10
42	585374.60	4127768.35	UCART1	99.78
43	585399.60	4127768.35	UCART1	99.43
44	585424.60	4127768.35	UCART1	99.01
45	585449.60	4127768.35	UCART1	98.62
46	585474.60	4127768.35	UCART1	98.08
47	585499.60	4127768.35	UCART1	97.19
48	585524.60	4127768.35	UCART1	96.33
49	585549.60	4127768.35	UCART1	96.35
50	585574.60	4127768.35	UCART1	95.86
51	585599.60	4127768.35	UCART1	95.52
52	585624.60	4127768.35	UCART1	95.44
53	585324.60	4127793.35	UCART1	100.62
54	585349.60	4127793.35	UCART1	100.15
55	585374.60	4127793.35	UCART1	99.74
56	585399.60	4127793.35	UCART1	99.32
57	585424.60	4127793.35	UCART1	98.87
58	585449.60	4127793.35	UCART1	98.37
59	585474.60	4127793.35	UCART1	97.79
60	585499.60	4127793.35	UCART1	97.03
61	585524.60	4127793.35	UCART1	96.48
62	585549.60	4127793.35	UCART1	96.53
63	585574.60	4127793.35	UCART1	96.02
64	585599.60	4127793.35	UCART1	95.74
65	585624.60	4127793.35	UCART1	95.49
66	585324.60	4127818.35	UCART1	100.83
67	585349.60	4127818.35	UCART1	100.36
68	585374.60	4127818.35	UCART1	99.95

# Receptor Pathway

AERMOD

69	585399.60	4127818.35	UCART1	99.45
70	585424.60	4127818.35	UCART1	98.90
71	585449.60	4127818.35	UCART1	98.40
72	585474.60	4127818.35	UCART1	97.86
73	585499.60	4127818.35	UCART1	97.15
74	585524.60	4127818.35	UCART1	96.64
75	585549.60	4127818.35	UCART1	96.66
76	585574.60	4127818.35	UCART1	96.08
77	585599.60	4127818.35	UCART1	95.77
78	585624.60	4127818.35	UCART1	95.44
79	585324.60	4127843.35	UCART1	100.88
80	585349.60	4127843.35	UCART1	100.46
81	585374.60	4127843.35	UCART1	100.07
82	585399.60	4127843.35	UCART1	99.58
83	585424.60	4127843.35	UCART1	99.00
84	585449.60	4127843.35	UCART1	98.52
85	585474.60	4127843.35	UCART1	98.07
86	585499.60	4127843.35	UCART1	97.39
87	585524.60	4127843.35	UCART1	96.77
88	585549.60	4127843.35	UCART1	96.69
89	585574.60	4127843.35	UCART1	96.04
90	585599.60	4127843.35	UCART1	95.63
91	585624.60	4127843.35	UCART1	95.32
92	585324.60	4127868.35	UCART1	100.74
93	585349.60	4127868.35	UCART1	100.28
94	585374.60	4127868.35	UCART1	99.86
95	585399.60	4127868.35	UCART1	99.45
96	585424.60	4127868.35	UCART1	98.93
97	585449.60	4127868.35	UCART1	98.45
98	585474.60	4127868.35	UCART1	98.00
99	585499.60	4127868.35	UCART1	97.41
100	585524.60	4127868.35	UCART1	96.84
101	585549.60	4127868.35	UCART1	96.63
102	585574.60	4127868.35	UCART1	95.99
103	585599.60	4127868.35	UCART1	95.49
104	585624.60	4127868.35	UCART1	95.21
105	585324.60	4127893.35	UCART1	100.74
106	585524.60	4127893.35	UCART1	96.93

# Receptor Pathway

AERMOD

107	585549.60	4127893.35	UCART1	96.54
108	585574.60	4127893.35	UCART1	96.00
109	585599.60	4127893.35	UCART1	95.49
110	585624.60	4127893.35	UCART1	95.09
111	585324.60	4127918.35	UCART1	100.53
112	585349.60	4127918.35	UCART1	99.63
113	585374.60	4127918.35	UCART1	99.28
114	585399.60	4127918.35	UCART1	99.28
115	585424.60	4127918.35	UCART1	98.81
116	585449.60	4127918.35	UCART1	98.33
117	585474.60	4127918.35	UCART1	97.94
118	585499.60	4127918.35	UCART1	97.64
119	585524.60	4127918.35	UCART1	97.26
120	585324.60	4127943.35	UCART1	99.94
121	585349.60	4127943.35	UCART1	99.22
122	585374.60	4127943.35	UCART1	98.95
123	585399.60	4127943.35	UCART1	99.04
124	585424.60	4127943.35	UCART1	98.58
125	585449.60	4127943.35	UCART1	98.19
126	585474.60	4127943.35	UCART1	97.87
127	585499.60	4127943.35	UCART1	97.56
128	585524.60	4127943.35	UCART1	97.16
129	585549.60	4127943.35	UCART1	96.70
130	585574.60	4127943.35	UCART1	96.17
131	585599.60	4127943.35	UCART1	95.80
132	585624.60	4127943.35	UCART1	95.48
133	585324.60	4127968.35	UCART1	99.53
134	585349.60	4127968.35	UCART1	98.95
135	585374.60	4127968.35	UCART1	98.63
136	585399.60	4127968.35	UCART1	98.55
137	585424.60	4127968.35	UCART1	98.12
138	585449.60	4127968.35	UCART1	97.81
139	585474.60	4127968.35	UCART1	97.53
140	585499.60	4127968.35	UCART1	97.13
141	585524.60	4127968.35	UCART1	96.71
142	585549.60	4127968.35	UCART1	96.30
143	585574.60	4127968.35	UCART1	95.85
144	585599.60	4127968.35	UCART1	95.64

# Receptor Pathway

AERMOD

145	585624.60	4127968.35	UCART1	95.47
146	585324.60	4127993.35	UCART1	99.52
147	585349.60	4127993.35	UCART1	98.92
148	585374.60	4127993.35	UCART1	98.47
149	585399.60	4127993.35	UCART1	98.10
150	585424.60	4127993.35	UCART1	97.65
151	585449.60	4127993.35	UCART1	97.38
152	585474.60	4127993.35	UCART1	97.13
153	585499.60	4127993.35	UCART1	96.62
154	585524.60	4127993.35	UCART1	96.21
155	585549.60	4127993.35	UCART1	95.91
156	585574.60	4127993.35	UCART1	95.44
157	585599.60	4127993.35	UCART1	95.32
158	585624.60	4127993.35	UCART1	95.22
159	585324.60	4128018.35	UCART1	99.78
160	585349.60	4128018.35	UCART1	99.22
161	585374.60	4128018.35	UCART1	98.70
162	585399.60	4128018.35	UCART1	98.21
163	585424.60	4128018.35	UCART1	97.60
164	585449.60	4128018.35	UCART1	97.37
165	585474.60	4128018.35	UCART1	97.18
166	585499.60	4128018.35	UCART1	96.40
167	585524.60	4128018.35	UCART1	96.03
168	585549.60	4128018.35	UCART1	95.97
169	585574.60	4128018.35	UCART1	95.28
170	585599.60	4128018.35	UCART1	95.02
171	585624.60	4128018.35	UCART1	95.04
172	585324.60	4128043.35	UCART1	99.42
173	585349.60	4128043.35	UCART1	98.96
174	585374.60	4128043.35	UCART1	98.40
175	585399.60	4128043.35	UCART1	97.91
176	585424.60	4128043.35	UCART1	97.38
177	585449.60	4128043.35	UCART1	97.24
178	585474.60	4128043.35	UCART1	96.98
179	585499.60	4128043.35	UCART1	96.04
180	585524.60	4128043.35	UCART1	95.69
181	585549.60	4128043.35	UCART1	95.67
182	585574.60	4128043.35	UCART1	94.97

# Receptor Pathway

AERMOD

183	585599.60	4128043.35	UCART1	94.70
184	585624.60	4128043.35	UCART1	94.71
185	585324.60	4128068.35	UCART1	99.31
186	585349.60	4128068.35	UCART1	98.70
187	585374.60	4128068.35	UCART1	98.11
188	585399.60	4128068.35	UCART1	97.63
189	585424.60	4128068.35	UCART1	97.15
190	585449.60	4128068.35	UCART1	97.06
191	585474.60	4128068.35	UCART1	96.73
192	585499.60	4128068.35	UCART1	95.69
193	585524.60	4128068.35	UCART1	95.34
194	585549.60	4128068.35	UCART1	95.37
195	585574.60	4128068.35	UCART1	94.70
196	585599.60	4128068.35	UCART1	94.41
197	585624.60	4128068.35	UCART1	94.35
198	585324.60	4128093.35	UCART1	99.27
199	585349.60	4128093.35	UCART1	98.63
200	585374.60	4128093.35	UCART1	98.07
201	585399.60	4128093.35	UCART1	97.56
202	585424.60	4128093.35	UCART1	97.01
203	585449.60	4128093.35	UCART1	96.87
204	585474.60	4128093.35	UCART1	96.46
205	585499.60	4128093.35	UCART1	95.32
206	585524.60	4128093.35	UCART1	95.01
207	585549.60	4128093.35	UCART1	95.09
208	585574.60	4128093.35	UCART1	94.49
209	585599.60	4128093.35	UCART1	94.21
210	585624.60	4128093.35	UCART1	94.06
211	585324.60	4128118.35	UCART1	99.04
212	585349.60	4128118.35	UCART1	98.51
213	585374.60	4128118.35	UCART1	98.02
214	585399.60	4128118.35	UCART1	97.47
215	585424.60	4128118.35	UCART1	96.88
216	585449.60	4128118.35	UCART1	96.70
217	585474.60	4128118.35	UCART1	96.21
218	585499.60	4128118.35	UCART1	94.99
219	585524.60	4128118.35	UCART1	94.73
220	585549.60	4128118.35	UCART1	94.83

# Receptor Pathway

AERMOD

221	585574.60	4128118.35	UCART1	94.32
222	585599.60	4128118.35	UCART1	94.08
223	585624.60	4128118.35	UCART1	93.90
224	585324.60	4128143.35	UCART1	98.52
225	585349.60	4128143.35	UCART1	98.02
226	585374.60	4128143.35	UCART1	97.55
227	585399.60	4128143.35	UCART1	97.03
228	585424.60	4128143.35	UCART1	96.59
229	585449.60	4128143.35	UCART1	96.55
230	585474.60	4128143.35	UCART1	96.01
231	585499.60	4128143.35	UCART1	94.79
232	585524.60	4128143.35	UCART1	94.57
233	585549.60	4128143.35	UCART1	94.65
234	585574.60	4128143.35	UCART1	94.20
235	585599.60	4128143.35	UCART1	94.01
236	585624.60	4128143.35	UCART1	93.85
237	585324.60	4128168.35	UCART1	98.63
238	585349.60	4128168.35	UCART1	97.99
239	585374.60	4128168.35	UCART1	97.58
240	585399.60	4128168.35	UCART1	97.09
241	585424.60	4128168.35	UCART1	96.55
242	585449.60	4128168.35	UCART1	96.42
243	585474.60	4128168.35	UCART1	95.87
244	585499.60	4128168.35	UCART1	94.68
245	585524.60	4128168.35	UCART1	94.49
246	585549.60	4128168.35	UCART1	94.57
247	585574.60	4128168.35	UCART1	94.12
248	585599.60	4128168.35	UCART1	93.91
249	585624.60	4128168.35	UCART1	93.78
250	585324.60	4128193.35	UCART1	98.54
251	585349.60	4128193.35	UCART1	98.00
252	585374.60	4128193.35	UCART1	97.56
253	585399.60	4128193.35	UCART1	97.05
254	585424.60	4128193.35	UCART1	96.49
255	585449.60	4128193.35	UCART1	96.30
256	585474.60	4128193.35	UCART1	95.74
257	585499.60	4128193.35	UCART1	94.58
258	585524.60	4128193.35	UCART1	94.41

# Receptor Pathway

AERMOD

259	585549.60	4128193.35	UCART1	94.48
260	585574.60	4128193.35	UCART1	94.04
261	585599.60	4128193.35	UCART1	93.83
262	585624.60	4128193.35	UCART1	93.74
263	585324.60	4128218.35	UCART1	98.23
264	585349.60	4128218.35	UCART1	97.76
265	585374.60	4128218.35	UCART1	97.34
266	585399.60	4128218.35	UCART1	96.84
267	585424.60	4128218.35	UCART1	96.34
268	585449.60	4128218.35	UCART1	96.19
269	585474.60	4128218.35	UCART1	95.62
270	585499.60	4128218.35	UCART1	94.49
271	585524.60	4128218.35	UCART1	94.32
272	585549.60	4128218.35	UCART1	94.38
273	585574.60	4128218.35	UCART1	93.95
274	585599.60	4128218.35	UCART1	93.76
275	585624.60	4128218.35	UCART1	93.68
276	585324.60	4128243.35	UCART1	98.02
277	585349.60	4128243.35	UCART1	97.49
278	585374.60	4128243.35	UCART1	97.14
279	585399.60	4128243.35	UCART1	96.72
280	585424.60	4128243.35	UCART1	96.21
281	585449.60	4128243.35	UCART1	96.06
282	585474.60	4128243.35	UCART1	95.50
283	585499.60	4128243.35	UCART1	94.41
284	585524.60	4128243.35	UCART1	94.24
285	585549.60	4128243.35	UCART1	94.28
286	585574.60	4128243.35	UCART1	93.86
287	585599.60	4128243.35	UCART1	93.69
288	585624.60	4128243.35	UCART1	93.53
289	585324.60	4128268.35	UCART1	98.06
290	585349.60	4128268.35	UCART1	97.38
291	585374.60	4128268.35	UCART1	97.13
292	585399.60	4128268.35	UCART1	96.86
293	585424.60	4128268.35	UCART1	96.20
294	585449.60	4128268.35	UCART1	95.87
295	585474.60	4128268.35	UCART1	95.35
296	585499.60	4128268.35	UCART1	94.32

# Receptor Pathway

AERMOD

297	585524.60	4128268.35	UCART1	94.15
298	585549.60	4128268.35	UCART1	94.18
299	585574.60	4128268.35	UCART1	93.78
300	585599.60	4128268.35	UCART1	93.60
301	585624.60	4128268.35	UCART1	93.32
302	585324.60	4128293.35	UCART1	97.90
303	585349.60	4128293.35	UCART1	97.19
304	585374.60	4128293.35	UCART1	96.84
305	585399.60	4128293.35	UCART1	96.75
306	585424.60	4128293.35	UCART1	96.13
307	585449.60	4128293.35	UCART1	95.64
308	585474.60	4128293.35	UCART1	95.19
309	585499.60	4128293.35	UCART1	94.31
310	585524.60	4128293.35	UCART1	94.03
311	585549.60	4128293.35	UCART1	93.96
312	585574.60	4128293.35	UCART1	93.61
313	585599.60	4128293.35	UCART1	93.52
314	585624.60	4128293.35	UCART1	93.22
315	585324.60	4128318.35	UCART1	97.50
316	585349.60	4128318.35	UCART1	96.83
317	585374.60	4128318.35	UCART1	96.48
318	585399.60	4128318.35	UCART1	96.48
319	585424.60	4128318.35	UCART1	95.90
320	585449.60	4128318.35	UCART1	95.38
321	585474.60	4128318.35	UCART1	95.02
322	585499.60	4128318.35	UCART1	94.33
323	585524.60	4128318.35	UCART1	93.85
324	585549.60	4128318.35	UCART1	93.70
325	585574.60	4128318.35	UCART1	93.54
326	585599.60	4128318.35	UCART1	93.53
327	585624.60	4128318.35	UCART1	93.16
328	585324.60	4128343.35	UCART1	97.45
329	585349.60	4128343.35	UCART1	96.69
330	585374.60	4128343.35	UCART1	96.16
331	585399.60	4128343.35	UCART1	96.17
332	585424.60	4128343.35	UCART1	95.62
333	585449.60	4128343.35	UCART1	95.19
334	585474.60	4128343.35	UCART1	95.00

# Receptor Pathway

AERMOD

335	585499.60	4128343.35	UCART1	94.38
336	585524.60	4128343.35	UCART1	93.78
337	585549.60	4128343.35	UCART1	93.60
338	585574.60	4128343.35	UCART1	93.44
339	585599.60	4128343.35	UCART1	93.29
340	585624.60	4128343.35	UCART1	92.83
341	585324.60	4128368.35	UCART1	97.10
342	585349.60	4128368.35	UCART1	96.40
343	585374.60	4128368.35	UCART1	95.93
344	585399.60	4128368.35	UCART1	95.96
345	585424.60	4128368.35	UCART1	95.43
346	585449.60	4128368.35	UCART1	95.06
347	585474.60	4128368.35	UCART1	94.96
348	585499.60	4128368.35	UCART1	94.31
349	585524.60	4128368.35	UCART1	93.68
350	585549.60	4128368.35	UCART1	93.43
351	585574.60	4128368.35	UCART1	93.13
352	585599.60	4128368.35	UCART1	92.79
353	585624.60	4128368.35	UCART1	92.29
354	585324.60	4128393.35	UCART1	96.42
355	585349.60	4128393.35	UCART1	95.93
356	585374.60	4128393.35	UCART1	95.78
357	585399.60	4128393.35	UCART1	95.87
358	585424.60	4128393.35	UCART1	95.37
359	585449.60	4128393.35	UCART1	94.98
360	585474.60	4128393.35	UCART1	94.79
361	585499.60	4128393.35	UCART1	94.06
362	585524.60	4128393.35	UCART1	93.44
363	585549.60	4128393.35	UCART1	93.05
364	585574.60	4128393.35	UCART1	92.64
365	585599.60	4128393.35	UCART1	92.25
366	585624.60	4128393.35	UCART1	91.81
367	585846.43	4127690.58	UCART1	94.15
368	585871.43	4127690.58	UCART1	93.92
369	585896.43	4127690.58	UCART1	93.70
370	585921.43	4127690.58	UCART1	93.60
371	585946.43	4127690.58	UCART1	93.33
372	585971.43	4127690.58	UCART1	93.14

# Receptor Pathway

AERMOD

373	585996.43	4127690.58	UCART1	92.91
374	586021.43	4127690.58	UCART1	92.54
375	586046.43	4127690.58	UCART1	92.05
376	585846.43	4127715.58	UCART1	93.81
377	585871.43	4127715.58	UCART1	93.66
378	585896.43	4127715.58	UCART1	93.57
379	585921.43	4127715.58	UCART1	93.41
380	585946.43	4127715.58	UCART1	92.90
381	585971.43	4127715.58	UCART1	92.58
382	585996.43	4127715.58	UCART1	92.50
383	586021.43	4127715.58	UCART1	92.26
384	586046.43	4127715.58	UCART1	91.68
385	585846.43	4127740.58	UCART1	93.62
386	585871.43	4127740.58	UCART1	93.43
387	585896.43	4127740.58	UCART1	93.46
388	585921.43	4127740.58	UCART1	93.27
389	585946.43	4127740.58	UCART1	92.75
390	585971.43	4127740.58	UCART1	92.39
391	585996.43	4127740.58	UCART1	92.35
392	586021.43	4127740.58	UCART1	92.13
393	586046.43	4127740.58	UCART1	91.47
394	585846.43	4127765.58	UCART1	93.53
395	585871.43	4127765.58	UCART1	93.26
396	585896.43	4127765.58	UCART1	93.22
397	585921.43	4127765.58	UCART1	93.05
398	585946.43	4127765.58	UCART1	92.62
399	585971.43	4127765.58	UCART1	92.28
400	585996.43	4127765.58	UCART1	92.25
401	586021.43	4127765.58	UCART1	92.02
402	586046.43	4127765.58	UCART1	91.33
403	585846.43	4127790.58	UCART1	93.52
404	585871.43	4127790.58	UCART1	93.20
405	585896.43	4127790.58	UCART1	92.99
406	585921.43	4127790.58	UCART1	92.81
407	585946.43	4127790.58	UCART1	92.47
408	585971.43	4127790.58	UCART1	92.16
409	585996.43	4127790.58	UCART1	92.15
410	586021.43	4127790.58	UCART1	91.92

# Receptor Pathway

AERMOD

411	586046.43	4127790.58	UCART1	91.24
412	585846.43	4127815.58	UCART1	93.48
413	585871.43	4127815.58	UCART1	93.23
414	585896.43	4127815.58	UCART1	92.85
415	585921.43	4127815.58	UCART1	92.62
416	585946.43	4127815.58	UCART1	92.31
417	585971.43	4127815.58	UCART1	92.01
418	585996.43	4127815.58	UCART1	92.00
419	586021.43	4127815.58	UCART1	91.80
420	586046.43	4127815.58	UCART1	91.16
421	585846.43	4127840.58	UCART1	93.29
422	585871.43	4127840.58	UCART1	93.20
423	585896.43	4127840.58	UCART1	92.78
424	585921.43	4127840.58	UCART1	92.53
425	585946.43	4127840.58	UCART1	92.18
426	585971.43	4127840.58	UCART1	91.83
427	585996.43	4127840.58	UCART1	91.79
428	586021.43	4127840.58	UCART1	91.60
429	586046.43	4127840.58	UCART1	91.05
430	585871.43	4127865.58	UCART1	92.87
431	585896.43	4127865.58	UCART1	92.62
432	585921.43	4127865.58	UCART1	92.33
433	585946.43	4127865.58	UCART1	92.03
434	585971.43	4127865.58	UCART1	91.75
435	585996.43	4127865.58	UCART1	91.57
436	586021.43	4127865.58	UCART1	91.35
437	586046.43	4127865.58	UCART1	91.06
438	585871.43	4127890.58	UCART1	92.31
439	585896.43	4127890.58	UCART1	92.26
440	585921.43	4127890.58	UCART1	92.22
441	585946.43	4127890.58	UCART1	92.16
442	585971.43	4127890.58	UCART1	91.95
443	585996.43	4127890.58	UCART1	91.71
444	586021.43	4127890.58	UCART1	91.45
445	586046.43	4127890.58	UCART1	91.20
446	585872.64	4127908.32	UCART1	92.02
447	585897.64	4127908.32	UCART1	92.06
448	585921.43	4127915.58	UCART1	92.09

# Receptor Pathway

AERMOD

449	585946.43	4127915.58	UCART1	92.11
450	585971.43	4127915.58	UCART1	91.94
451	585996.43	4127915.58	UCART1	91.70
452	586021.43	4127915.58	UCART1	91.41
453	586046.43	4127915.58	UCART1	91.13
454	585966.56	4127949.72	UCART1	91.60
455	585991.56	4127949.72	UCART1	91.42
456	586016.56	4127949.72	UCART1	91.16
457	586041.56	4127949.72	UCART1	90.79
458	585966.56	4127974.72	UCART1	91.30
459	585991.56	4127974.72	UCART1	91.16
460	586016.56	4127974.72	UCART1	90.90
461	586041.56	4127974.72	UCART1	90.46
462	585966.56	4127999.72	UCART1	90.96
463	585991.56	4127999.72	UCART1	90.79
464	586016.56	4127999.72	UCART1	90.54
465	586041.56	4127999.72	UCART1	90.13
466	585966.56	4128024.72	UCART1	90.34
467	585991.56	4128024.72	UCART1	89.92
468	586016.56	4128024.72	UCART1	89.93
469	586041.56	4128024.72	UCART1	89.87
470	585966.56	4128049.72	UCART1	89.29
471	585991.56	4128049.72	UCART1	89.35
472	586016.56	4128049.72	UCART1	89.42
473	586041.56	4128049.72	UCART1	89.66
474	585966.56	4128074.72	UCART1	89.71
475	585991.56	4128074.72	UCART1	88.83
476	586016.56	4128074.72	UCART1	89.12
477	586041.56	4128074.72	UCART1	89.56
478	585891.56	4128099.72	UCART1	91.33
479	585916.56	4128099.72	UCART1	90.99
480	585941.56	4128099.72	UCART1	91.01
481	585966.56	4128099.72	UCART1	90.01
482	585991.56	4128099.72	UCART1	88.62
483	586016.56	4128099.72	UCART1	88.71
484	586041.56	4128099.72	UCART1	89.38
485	585891.56	4128124.72	UCART1	90.98
486	585916.56	4128124.72	UCART1	90.68

# Receptor Pathway

AERMOD

487	585941.56	4128124.72	UCART1	90.62
488	585966.56	4128124.72	UCART1	90.04
489	585991.56	4128124.72	UCART1	88.87
490	586016.56	4128124.72	UCART1	88.34
491	586041.56	4128124.72	UCART1	88.99
492	585891.56	4128149.72	UCART1	90.56
493	585916.56	4128149.72	UCART1	90.41
494	585941.56	4128149.72	UCART1	90.36
495	585966.56	4128149.72	UCART1	90.21
496	585991.56	4128149.72	UCART1	89.57
497	586016.56	4128149.72	UCART1	88.42
498	586041.56	4128149.72	UCART1	88.34
499	585891.56	4128174.72	UCART1	90.41
500	585916.56	4128174.72	UCART1	90.23
501	585941.56	4128174.72	UCART1	90.24
502	585966.56	4128174.72	UCART1	90.15
503	585991.56	4128174.72	UCART1	89.85
504	586016.56	4128174.72	UCART1	88.78
505	586041.56	4128174.72	UCART1	87.77
506	585891.56	4128199.72	UCART1	90.05
507	585916.56	4128199.72	UCART1	89.95
508	585941.56	4128199.72	UCART1	89.93
509	585966.56	4128199.72	UCART1	89.82
510	585991.56	4128199.72	UCART1	89.66
511	586016.56	4128199.72	UCART1	89.01
512	586041.56	4128199.72	UCART1	88.09
513	585866.56	4128224.72	UCART1	89.85
514	585891.56	4128224.72	UCART1	89.75
515	585916.56	4128224.72	UCART1	89.68
516	585941.56	4128224.72	UCART1	89.58
517	585966.56	4128224.72	UCART1	89.42
518	585991.56	4128224.72	UCART1	89.38
519	586016.56	4128224.72	UCART1	89.02
520	586041.56	4128224.72	UCART1	88.39
521	585866.56	4128249.72	UCART1	89.56
522	585891.56	4128249.72	UCART1	89.47
523	585916.56	4128249.72	UCART1	89.39
524	585941.56	4128249.72	UCART1	89.28

# Receptor Pathway

AERMOD

525	585966.56	4128249.72	UCART1	89.12
526	585991.56	4128249.72	UCART1	89.09
527	586016.56	4128249.72	UCART1	88.86
528	586041.56	4128249.72	UCART1	88.41
529	585866.56	4128274.72	UCART1	89.33
530	585891.56	4128274.72	UCART1	89.23
531	585916.56	4128274.72	UCART1	89.13
532	585941.56	4128274.72	UCART1	89.11
533	585966.56	4128274.72	UCART1	89.02
534	585991.56	4128274.72	UCART1	88.80
535	586016.56	4128274.72	UCART1	88.57
536	586041.56	4128274.72	UCART1	88.20
537	585866.56	4128299.72	UCART1	89.41
538	585891.56	4128299.72	UCART1	89.33
539	585916.56	4128299.72	UCART1	89.22
540	585941.56	4128299.72	UCART1	89.17
541	585966.56	4128299.72	UCART1	88.96
542	585991.56	4128299.72	UCART1	88.56
543	586016.56	4128299.72	UCART1	88.26
544	586041.56	4128299.72	UCART1	88.22
545	585866.56	4128324.72	UCART1	89.11
546	585891.56	4128324.72	UCART1	89.06
547	585916.56	4128324.72	UCART1	89.02
548	585941.56	4128324.72	UCART1	88.88
549	585966.56	4128324.72	UCART1	88.54
550	585991.56	4128324.72	UCART1	88.18
551	586016.56	4128324.72	UCART1	88.23
552	586041.56	4128324.72	UCART1	88.62
553	585681.73	4128195.37	UCART1	92.29
554	585701.73	4128195.37	UCART1	91.99
555	585721.73	4128195.37	UCART1	91.76
556	585681.73	4128215.37	UCART1	92.27
557	585701.73	4128215.37	UCART1	91.98
558	585721.73	4128215.37	UCART1	91.72
559	585681.73	4128235.37	UCART1	92.06
560	585701.73	4128235.37	UCART1	91.82
561	585721.73	4128235.37	UCART1	91.56
562	585796.83	4127858.26	UCART1	93.23

# Receptor Pathway

AERMOD

563	585796.83	4127883.26	UCART1	93.05
564	585798.03	4127901.01	UCART1	92.88
565	585810.13	4127861.09	UCART1	93.11
566	585810.13	4127886.09	UCART1	92.92
567	585811.34	4127903.83	UCART1	92.73

## Plant Boundary Receptors

### Receptor Groups

Record Number	Group ID	Group Description
1	UCART1	Receptors generated from Uniform Cartesian Grid

**Model Output**  
**Unit Emission Rates (1 g/s)**

\*\*\* AERMOD - VERSION 21112 \*\*\*    \*\*\* 1655 S. De Anza Blvd, Cupertino, CA  
 \*\*\* AERMET - VERSION 14134 \*\*\*    \*\*\* Construction HRA

\*\*\*                                  04/20/22  
 \*\*\*                                  12:51:49  
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\*\*\* MODELOPTS: RegDFAULT CONC ELEV FLGPOL URBAN

\*\*\* THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION    VALUES FOR SOURCE GROUP: ONSITE    \*\*\*  
 INCLUDING SOURCE(S): PAREA1 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC	**
585324.60	4127693.35	0.04478	585349.60	4127693.35	0.04614	
585374.60	4127693.35	0.04738	585399.60	4127693.35	0.04925	
585424.60	4127693.35	0.05028	585449.60	4127693.35	0.05136	
585474.60	4127693.35	0.05287	585499.60	4127693.35	0.05576	
585524.60	4127693.35	0.06079	585549.60	4127693.35	0.06889	
585574.60	4127693.35	0.08309	585599.60	4127693.35	0.10570	
585624.60	4127693.35	0.14016	585324.60	4127718.35	0.05089	
585349.60	4127718.35	0.05285	585374.60	4127718.35	0.05474	
585399.60	4127718.35	0.05644	585424.60	4127718.35	0.05890	
585449.60	4127718.35	0.06032	585474.60	4127718.35	0.06216	
585499.60	4127718.35	0.06538	585524.60	4127718.35	0.07100	
585549.60	4127718.35	0.07965	585574.60	4127718.35	0.09618	
585599.60	4127718.35	0.12438	585624.60	4127718.35	0.16579	
585324.60	4127743.35	0.05792	585349.60	4127743.35	0.06052	
585374.60	4127743.35	0.06316	585399.60	4127743.35	0.06572	
585424.60	4127743.35	0.06810	585449.60	4127743.35	0.07155	
585474.60	4127743.35	0.07416	585499.60	4127743.35	0.07787	
585524.60	4127743.35	0.08398	585549.60	4127743.35	0.09354	
585574.60	4127743.35	0.11278	585599.60	4127743.35	0.14784	
585624.60	4127743.35	0.20182	585324.60	4127768.35	0.06636	
585349.60	4127768.35	0.06984	585374.60	4127768.35	0.07340	
585399.60	4127768.35	0.07705	585424.60	4127768.35	0.08074	
585449.60	4127768.35	0.08424	585474.60	4127768.35	0.08955	
585499.60	4127768.35	0.09425	585524.60	4127768.35	0.10137	
585549.60	4127768.35	0.11206	585574.60	4127768.35	0.13465	
585599.60	4127768.35	0.17705	585624.60	4127768.35	0.24959	
585324.60	4127793.35	0.07598	585349.60	4127793.35	0.08079	
585374.60	4127793.35	0.08582	585399.60	4127793.35	0.09114	
585424.60	4127793.35	0.09669	585449.60	4127793.35	0.10430	
585474.60	4127793.35	0.11001	585499.60	4127793.35	0.11657	
585524.60	4127793.35	0.12504	585549.60	4127793.35	0.13736	
585574.60	4127793.35	0.16387	585599.60	4127793.35	0.21623	
585624.60	4127793.35	0.31760	585324.60	4127818.35	0.08706	
585349.60	4127818.35	0.09350	585374.60	4127818.35	0.10039	
585399.60	4127818.35	0.10797	585424.60	4127818.35	0.11620	
585449.60	4127818.35	0.12790	585474.60	4127818.35	0.13662	
585499.60	4127818.35	0.14635	585524.60	4127818.35	0.15783	

**Model Output**  
**Unit Emission Rates (1 g/s)**

585549.60	4127818.35	0.17317	585574.60	4127818.35	0.20526
585599.60	4127818.35	0.27260	585624.60	4127818.35	0.41917
585324.60	4127843.35	0.10041	585349.60	4127843.35	0.10889

\*\*\* AERMOD - VERSION 21112 \*\*\* \*\*\* 1655 S. De Anza Blvd, Cupertino, CA \*\*\* 04/20/22  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\* Construction HRA \*\*\* 12:51:49  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

\*\*\* THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE \*\*\*  
 INCLUDING SOURCE(S): PAREA1 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*3 \*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585374.60	4127843.35	0.11822	585399.60	4127843.35	0.12875
585424.60	4127843.35	0.14061	585449.60	4127843.35	0.15892
585474.60	4127843.35	0.17231	585499.60	4127843.35	0.18742
585524.60	4127843.35	0.20486	585549.60	4127843.35	0.22613
585574.60	4127843.35	0.26691	585599.60	4127843.35	0.35726
585624.60	4127843.35	0.57863	585324.60	4127868.35	0.11722
585349.60	4127868.35	0.12857	585374.60	4127868.35	0.14133
585399.60	4127868.35	0.15582	585424.60	4127868.35	0.17269
585449.60	4127868.35	0.20118	585474.60	4127868.35	0.22247
585499.60	4127868.35	0.24697	585524.60	4127868.35	0.27534
585549.60	4127868.35	0.30894	585574.60	4127868.35	0.36458
585599.60	4127868.35	0.48853	585624.60	4127868.35	0.84078
585324.60	4127893.35	0.13799	585524.60	4127893.35	0.38644
585549.60	4127893.35	0.44856	585574.60	4127893.35	0.53731
585599.60	4127893.35	0.71318	585624.60	4127893.35	1.31317
585324.60	4127918.35	0.16440	585349.60	4127918.35	0.18627
585374.60	4127918.35	0.21036	585399.60	4127918.35	0.23766
585424.60	4127918.35	0.27346	585449.60	4127918.35	0.33977
585474.60	4127918.35	0.39739	585499.60	4127918.35	0.47038
585524.60	4127918.35	0.56644	585324.60	4127943.35	0.19785
585349.60	4127943.35	0.22657	585374.60	4127943.35	0.25972
585399.60	4127943.35	0.29860	585424.60	4127943.35	0.37623
585449.60	4127943.35	0.44761	585474.60	4127943.35	0.54182
585499.60	4127943.35	0.67094	585524.60	4127943.35	0.85812
585549.60	4127943.35	1.14958	585574.60	4127943.35	1.66176
585599.60	4127943.35	2.77096	585624.60	4127943.35	6.73332
585324.60	4127968.35	0.23676	585349.60	4127968.35	0.27421
585374.60	4127968.35	0.31976	585399.60	4127968.35	0.39930
585424.60	4127968.35	0.47862	585449.60	4127968.35	0.58415
585474.60	4127968.35	0.73002	585499.60	4127968.35	0.94287
585524.60	4127968.35	1.27076	585549.60	4127968.35	1.81661
585574.60	4127968.35	2.83824	585599.60	4127968.35	5.07275
585624.60	4127968.35	11.43746	585324.60	4127993.35	0.27934
585349.60	4127993.35	0.32746	585374.60	4127993.35	0.40730

**Model Output**  
**Unit Emission Rates (1 g/s)**

585399.60	4127993.35	0.48720	585424.60	4127993.35	0.59385
585449.60	4127993.35	0.73851	585474.60	4127993.35	0.94331
585499.60	4127993.35	1.25094	585524.60	4127993.35	1.73127
585549.60	4127993.35	2.53349	585574.60	4127993.35	4.01779
585599.60	4127993.35	7.05703	585624.60	4127993.35	14.57708
585324.60	4128018.35	0.32426	585349.60	4128018.35	0.38299

\*\*\* AERMOD - VERSION 21112 \*\*\* \*\*\* 1655 S. De Anza Blvd, Cupertino, CA \*\*\* 04/20/22  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\* Construction HRA \*\*\* 12:51:49  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

\*\*\* THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE \*\*\*  
 INCLUDING SOURCE(S): PAREA1 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585374.60	4128018.35	0.45812	585399.60	4128018.35	0.57408
585424.60	4128018.35	0.70663	585449.60	4128018.35	0.88587
585474.60	4128018.35	1.13922	585499.60	4128018.35	1.52043
585524.60	4128018.35	2.10035	585549.60	4128018.35	3.03533
585574.60	4128018.35	4.70139	585599.60	4128018.35	7.94945
585624.60	4128018.35	15.48257 MEIR	585324.60	4128043.35	0.37359
585349.60	4128043.35	0.44207	585374.60	4128043.35	0.54123
585399.60	4128043.35	0.65446	585424.60	4128043.35	0.80466
585449.60	4128043.35	1.00540	585474.60	4128043.35	1.28442
585499.60	4128043.35	1.68792	585524.60	4128043.35	2.27106
585549.60	4128043.35	3.14707	585574.60	4128043.35	4.51625
585599.60	4128043.35	6.66256	585624.60	4128043.35	9.55422
585324.60	4128068.35	0.41881	585349.60	4128068.35	0.49549
585374.60	4128068.35	0.59538	585399.60	4128068.35	0.71613
585424.60	4128068.35	0.87263	585449.60	4128068.35	1.07639
585474.60	4128068.35	1.34894	585499.60	4128068.35	1.71838
585524.60	4128068.35	2.21361	585549.60	4128068.35	2.88019
585574.60	4128068.35	3.74664	585599.60	4128068.35	4.76974
585624.60	4128068.35	5.70026	585324.60	4128093.35	0.45654
585349.60	4128093.35	0.53658	585374.60	4128093.35	0.63159
585399.60	4128093.35	0.75156	585424.60	4128093.35	0.90233
585449.60	4128093.35	1.09124	585474.60	4128093.35	1.33054
585499.60	4128093.35	1.63080	585524.60	4128093.35	1.99918
585549.60	4128093.35	2.43763	585574.60	4128093.35	2.91541
585599.60	4128093.35	3.36447	585624.60	4128093.35	3.68163
585324.60	4128118.35	0.48391	585349.60	4128118.35	0.55584
585374.60	4128118.35	0.64796	585399.60	4128118.35	0.75963
585424.60	4128118.35	0.89461	585449.60	4128118.35	1.05611
585474.60	4128118.35	1.24854	585499.60	4128118.35	1.47144
585524.60	4128118.35	1.72146	585549.60	4128118.35	1.98416
585574.60	4128118.35	2.22929	585599.60	4128118.35	2.41659

## Model Output Unit Emission Rates (1 g/s)

585624.60	4128118.35	2.50656		585324.60	4128143.35	0.49030
585349.60	4128143.35	0.56165		585374.60	4128143.35	0.64537
585399.60	4128143.35	0.74326		585424.60	4128143.35	0.85649
585449.60	4128143.35	0.98542		585474.60	4128143.35	1.12989
585499.60	4128143.35	1.28529		585524.60	4128143.35	1.44420
585549.60	4128143.35	1.59097		585574.60	4128143.35	1.70888
585599.60	4128143.35	1.77620		585624.60	4128143.35	1.78281
585324.60	4128168.35	0.49907		585349.60	4128168.35	0.55264
585374.60	4128168.35	0.62514		585399.60	4128168.35	0.70684

\*\*\* MODELOPTS: RegDFAULT CONC ELEV FLGPOL URBAN

\*\*\* THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE \*\*\*  
INCLUDING SOURCE(S): PAREA1 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*\*3

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585424.60	4128168.35	0.79737	585449.60	4128168.35	0.89502
585474.60	4128168.35	0.99785	585499.60	4128168.35	1.10132
585524.60	4128168.35	1.19680	585549.60	4128168.35	1.27294
585574.60	4128168.35	1.32426	585599.60	4128168.35	1.33809
585624.60	4128168.35	1.31629	585324.60	4128193.35	0.47725
585349.60	4128193.35	0.53219	585374.60	4128193.35	0.59251
585399.60	4128193.35	0.65791	585424.60	4128193.35	0.72719
585449.60	4128193.35	0.79794	585474.60	4128193.35	0.86804
585499.60	4128193.35	0.93434	585524.60	4128193.35	0.98842
585549.60	4128193.35	1.02386	585574.60	4128193.35	1.04099
585599.60	4128193.35	1.03247	585624.60	4128193.35	1.00371
585324.60	4128218.35	0.45811	585349.60	4128218.35	0.50372
585374.60	4128218.35	0.55215	585399.60	4128218.35	0.60263
585424.60	4128218.35	0.65372	585449.60	4128218.35	0.70297
585474.60	4128218.35	0.74899	585499.60	4128218.35	0.78990
585524.60	4128218.35	0.81821	585549.60	4128218.35	0.83111
585574.60	4128218.35	0.83101	585599.60	4128218.35	0.81464
585624.60	4128218.35	0.78690	585324.60	4128243.35	0.43328
585349.60	4128243.35	0.47013	585374.60	4128243.35	0.50781
585399.60	4128243.35	0.54555	585424.60	4128243.35	0.58212
585449.60	4128243.35	0.61522	585474.60	4128243.35	0.64424
585499.60	4128243.35	0.66833	585524.60	4128243.35	0.68107
585549.60	4128243.35	0.68201	585574.60	4128243.35	0.67391
585599.60	4128243.35	0.65595	585624.60	4128243.35	0.63171
585324.60	4128268.35	0.40487	585349.60	4128268.35	0.43398
585374.60	4128268.35	0.46245	585399.60	4128268.35	0.48974
585424.60	4128268.35	0.51533	585449.60	4128268.35	0.53703
585474.60	4128268.35	0.55436	585499.60	4128268.35	0.56751

**Model Output**  
**Unit Emission Rates (1 g/s)**

585524.60	4128268.35	0.57117	585549.60	4128268.35	0.56613
585574.60	4128268.35	0.55481	585599.60	4128268.35	0.53785
585624.60	4128268.35	0.51738	585324.60	4128293.35	0.37512
585349.60	4128293.35	0.39758	585374.60	4128293.35	0.41875
585399.60	4128293.35	0.43784	585424.60	4128293.35	0.45509
585449.60	4128293.35	0.46883	585474.60	4128293.35	0.47829
585499.60	4128293.35	0.48421	585524.60	4128293.35	0.48295
585549.60	4128293.35	0.47531	585574.60	4128293.35	0.46318
585599.60	4128293.35	0.44811	585624.60	4128293.35	0.43128
585324.60	4128318.35	0.34551	585349.60	4128318.35	0.36244
585374.60	4128318.35	0.37778	585399.60	4128318.35	0.39077
585424.60	4128318.35	0.40198	585449.60	4128318.35	0.41011

\*\*\* AERMOD - VERSION 21112 \*\*\* \*\*\* 1655 S. De Anza Blvd, Cupertino, CA \*\*\* 04/20/22  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\* Construction HRA \*\*\* 12:51:49  
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\*\*\* MODELOPTs: RegDFault CONC ELEV FLGPOL URBAN

\*\*\* THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE \*\*\*  
 INCLUDING SOURCE(S): PAREA1 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*3 \*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585474.60	4128318.35	0.41437	585499.60	4128318.35	0.41559
585524.60	4128318.35	0.41165	585549.60	4128318.35	0.40308
585574.60	4128318.35	0.39167	585599.60	4128318.35	0.37874
585624.60	4128318.35	0.36494	585324.60	4128343.35	0.31654
585349.60	4128343.35	0.32914	585374.60	4128343.35	0.34016
585399.60	4128343.35	0.34869	585424.60	4128343.35	0.35561
585449.60	4128343.35	0.35973	585474.60	4128343.35	0.36045
585499.60	4128343.35	0.35902	585524.60	4128343.35	0.35389
585549.60	4128343.35	0.34534	585574.60	4128343.35	0.33504
585599.60	4128343.35	0.32403	585624.60	4128343.35	0.31267
585324.60	4128368.35	0.28937	585349.60	4128368.35	0.29851
585374.60	4128368.35	0.30605	585399.60	4128368.35	0.31131
585424.60	4128368.35	0.31520	585449.60	4128368.35	0.31667
585474.60	4128368.35	0.31527	585499.60	4128368.35	0.31254
585524.60	4128368.35	0.30676	585549.60	4128368.35	0.29868
585574.60	4128368.35	0.28956	585599.60	4128368.35	0.28020
585624.60	4128368.35	0.27081	585324.60	4128393.35	0.26440
585349.60	4128393.35	0.27074	585374.60	4128393.35	0.27545
585399.60	4128393.35	0.27830	585424.60	4128393.35	0.28005
585449.60	4128393.35	0.27988	585474.60	4128393.35	0.27750
585499.60	4128393.35	0.27421	585524.60	4128393.35	0.26799
585549.60	4128393.35	0.26055	585574.60	4128393.35	0.25258
585599.60	4128393.35	0.24464	585624.60	4128393.35	0.23689
585846.43	4127690.58	0.80606	585871.43	4127690.58	0.84765
585896.43	4127690.58	0.87314	585921.43	4127690.58	0.88454

## Model Output Unit Emission Rates (1 g/s)

585946.43	4127690.58	0.88396	585971.43	4127690.58	0.87338
585996.43	4127690.58	0.85483	586021.43	4127690.58	0.83005
586046.43	4127690.58	0.80053	585846.43	4127715.58	1.00010
585871.43	4127715.58	1.03740	585896.43	4127715.58	1.05482
585921.43	4127715.58	1.05521	585946.43	4127715.58	1.04170
585971.43	4127715.58	1.01702	585996.43	4127715.58	0.98379
586021.43	4127715.58	0.94431	586046.43	4127715.58	0.90041
585846.43	4127740.58	1.25055	585871.43	4127740.58	1.27792
585896.43	4127740.58	1.28017	585921.43	4127740.58	1.26218
585946.43	4127740.58	1.22852	585971.43	4127740.58	1.18297
585996.43	4127740.58	1.12885	586021.43	4127740.58	1.06907
586046.43	4127740.58	1.00591	585846.43	4127765.58	1.57747
585871.43	4127765.58	1.58370	585896.43	4127765.58	1.55908
585921.43	4127765.58	1.51128	585946.43	4127765.58	1.44674
585971.43	4127765.58	1.37056	585996.43	4127765.58	1.28705

\*\*\* MODELOPTS: ReqFAULT CONC ELEV FLGPOL URBAN

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\*\*\* THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE \*\*\*  
INCLUDING SOURCE(S): PAREA1 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
586021.43	4127765.58	1.19981	586046.43	4127765.58	1.11169
585846.43	4127790.58	2.00590	585871.43	4127790.58	1.97122
585896.43	4127790.58	1.90082	585921.43	4127790.58	1.80571
585946.43	4127790.58	1.69464	585971.43	4127790.58	1.57455
585996.43	4127790.58	1.45092	586021.43	4127790.58	1.32810
586046.43	4127790.58	1.20925	585846.43	4127815.58	2.56521
585871.43	4127815.58	2.45637	585896.43	4127815.58	2.31022
585921.43	4127815.58	2.14182	585946.43	4127815.58	1.96288
585971.43	4127815.58	1.78234	585996.43	4127815.58	1.60679
586021.43	4127815.58	1.44072	586046.43	4127815.58	1.28682
585846.43	4127840.58	3.28453	585871.43	4127840.58	3.04779
585896.43	4127840.58	2.78048	585921.43	4127840.58	2.50275
585946.43	4127840.58	2.22957	585971.43	4127840.58	1.97121
585996.43	4127840.58	1.73384	586021.43	4127840.58	1.52014
586046.43	4127840.58	1.33056	585871.43	4127865.58	3.73372
585896.43	4127865.58	3.28055	585921.43	4127865.58	2.84924
585946.43	4127865.58	2.45587	585971.43	4127865.58	2.10766
585996.43	4127865.58	1.80559	586021.43	4127865.58	1.54698
586046.43	4127865.58	1.32740	585871.43	4127890.58	4.45362
585896.43	4127890.58	3.73552	585921.43	4127890.58	3.11174
585946.43	4127890.58	2.58638	585971.43	4127890.58	2.15184
585996.43	4127890.58	1.79601	586021.43	4127890.58	1.50582

## Model Output Unit Emission Rates (1 g/s)

586046.43	4127890.58	1.26924	585872.64	4127908.32	4.85538	CREC
585897.64	4127908.32	3.91874	585921.43	4127915.58	3.19445	
585946.43	4127915.58	2.56066	585971.43	4127915.58	2.07011	
585996.43	4127915.58	1.68922	586021.43	4127915.58	1.39153	
586046.43	4127915.58	1.15702	585966.56	4127949.72	1.82789	
585991.56	4127949.72	1.46017	586016.56	4127949.72	1.18491	
586041.56	4127949.72	0.97502	585966.56	4127974.72	1.47300	
585991.56	4127974.72	1.17738	586016.56	4127974.72	0.95810	
586041.56	4127974.72	0.79165	585966.56	4127999.72	1.10437	
585991.56	4127999.72	0.89616	586016.56	4127999.72	0.73968	
586041.56	4127999.72	0.61932	585966.56	4128024.72	0.78988	
585991.56	4128024.72	0.65788	586016.56	4128024.72	0.55599	
586041.56	4128024.72	0.47520	585966.56	4128049.72	0.56018	
585991.56	4128049.72	0.48181	586016.56	4128049.72	0.41786	
586041.56	4128049.72	0.36534	585966.56	4128074.72	0.41292	
585991.56	4128074.72	0.36238	586016.56	4128074.72	0.32153	
586041.56	4128074.72	0.28674	585891.56	4128099.72	0.46451	
585916.56	4128099.72	0.40731	585941.56	4128099.72	0.36080	

\*\*\* MODELOPTs: RegDEFAULT CONC ELEV FLGPOL URBAN

\*\*\* THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE \*\*\*  
INCLUDING SOURCE(S): PAREA1 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*3 \*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585966.56	4128099.72	0.31984	585991.56	4128099.72	0.28437
586016.56	4128099.72	0.25599	586041.56	4128099.72	0.23180
585891.56	4128124.72	0.36710	585916.56	4128124.72	0.32381
585941.56	4128124.72	0.28901	585966.56	4128124.72	0.25906
585991.56	4128124.72	0.23276	586016.56	4128124.72	0.21087
586041.56	4128124.72	0.19287	585891.56	4128149.72	0.30386
585916.56	4128149.72	0.26895	585941.56	4128149.72	0.24091
585966.56	4128149.72	0.21749	585991.56	4128149.72	0.19710
586016.56	4128149.72	0.17902	586041.56	4128149.72	0.16424
585891.56	4128174.72	0.25983	585916.56	4128174.72	0.23038
585941.56	4128174.72	0.20681	585966.56	4128174.72	0.18719
585991.56	4128174.72	0.17049	586016.56	4128174.72	0.15552
586041.56	4128174.72	0.14256	585891.56	4128199.72	0.22634
585916.56	4128199.72	0.20144	585941.56	4128199.72	0.18113
585966.56	4128199.72	0.16417	585991.56	4128199.72	0.14987
586016.56	4128199.72	0.13731	586041.56	4128199.72	0.12628
585866.56	4128224.72	0.22594	585891.56	4128224.72	0.19988
585916.56	4128224.72	0.17873	585941.56	4128224.72	0.16110
585966.56	4128224.72	0.14623	585991.56	4128224.72	0.13372

## Model Output Unit Emission Rates (1 g/s)

**Model Output**  
**Unit Emission Rates (1 g/s)**

\*\*\* AERMOD - VERSION 21112 \*\*\*    \*\*\* 1655 S. De Anza Blvd, Cupertino, CA  
 \*\*\* AERMET - VERSION 14134 \*\*\*    \*\*\* Construction HRA  
 \*\*\* MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

\*\*\* THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION    VALUES FOR SOURCE GROUP: HAUL    \*\*\*  
 INCLUDING SOURCE(S):    L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,  
 L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,  
 L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,  
 L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER    IN MICROGRAMS/M\*\*3    \*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585324.60	4127693.35	0.04935	585349.60	4127693.35	0.05267
585374.60	4127693.35	0.05639	585399.60	4127693.35	0.06059
585424.60	4127693.35	0.06653	585449.60	4127693.35	0.07302
585474.60	4127693.35	0.07987	585499.60	4127693.35	0.09075
585524.60	4127693.35	0.10212	585549.60	4127693.35	0.11151
585574.60	4127693.35	0.12335	585599.60	4127693.35	0.13683
585624.60	4127693.35	0.15334	585324.60	4127718.35	0.05318
585349.60	4127718.35	0.05711	585374.60	4127718.35	0.06152
585399.60	4127718.35	0.06646	585424.60	4127718.35	0.07256
585449.60	4127718.35	0.07841	585474.60	4127718.35	0.08711
585499.60	4127718.35	0.10001	585524.60	4127718.35	0.11490
585549.60	4127718.35	0.12620	585574.60	4127718.35	0.14136
585599.60	4127718.35	0.15990	585624.60	4127718.35	0.17843
585324.60	4127743.35	0.05719	585349.60	4127743.35	0.06161
585374.60	4127743.35	0.06662	585399.60	4127743.35	0.07230
585424.60	4127743.35	0.07876	585449.60	4127743.35	0.08589
585474.60	4127743.35	0.09676	585499.60	4127743.35	0.11146
585524.60	4127743.35	0.12923	585549.60	4127743.35	0.14317
585574.60	4127743.35	0.16400	585599.60	4127743.35	0.18867
585624.60	4127743.35	0.21389	585324.60	4127768.35	0.06206
585349.60	4127768.35	0.06712	585374.60	4127768.35	0.07278
585399.60	4127768.35	0.07931	585424.60	4127768.35	0.08703
585449.60	4127768.35	0.09597	585474.60	4127768.35	0.10785
585499.60	4127768.35	0.12550	585524.60	4127768.35	0.14646
585549.60	4127768.35	0.16465	585574.60	4127768.35	0.19394
585599.60	4127768.35	0.22551	585624.60	4127768.35	0.26259
585324.60	4127793.35	0.06734	585349.60	4127793.35	0.07328
585374.60	4127793.35	0.08003	585399.60	4127793.35	0.08792
585424.60	4127793.35	0.09727	585449.60	4127793.35	0.10855
585474.60	4127793.35	0.12409	585499.60	4127793.35	0.14435
585524.60	4127793.35	0.16834	585549.60	4127793.35	0.19316
585574.60	4127793.35	0.23127	585599.60	4127793.35	0.27566
585624.60	4127793.35	0.33172	585324.60	4127818.35	0.07323
585349.60	4127818.35	0.08005	585374.60	4127818.35	0.08788

**Model Output**  
**Unit Emission Rates (1 g/s)**

585399.60	4127818.35	0.09728	585424.60	4127818.35	0.10865
585449.60	4127818.35	0.12230	585474.60	4127818.35	0.14090
585499.60	4127818.35	0.16550	585524.60	4127818.35	0.19535
585549.60	4127818.35	0.22937	585574.60	4127818.35	0.28325
585599.60	4127818.35	0.34936	585624.60	4127818.35	0.43937
585324.60	4127843.35	0.08025	585349.60	4127843.35	0.08807

\*\*\* AERMOD - VERSION 21112 \*\*\* \*\*\* 1655 S. De Anza Blvd, Cupertino, CA \*\*\* 04/20/22  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\* Construction HRA \*\*\* 12:51:49  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: HAUL ***					
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,					
L0000006	,	L0000007	,	L0000008	,
L0000014	,	L0000015	,	L0000016	,
L0000022	,	L0000023	,	L0000024	,
				L0000009	,
				L0000010	,
				L0000011	,
				L0000012	,
				L0000013	,
				L0000018	,
				L0000019	,
				L0000020	,
				L0000021	,
				L0000027	,
				L0000028	,
				.	.

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*3 \*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585374.60	4127843.35	0.09718	585399.60	4127843.35	0.10823
585424.60	4127843.35	0.12184	585449.60	4127843.35	0.13830
585474.60	4127843.35	0.15964	585499.60	4127843.35	0.18971
585524.60	4127843.35	0.22859	585549.60	4127843.35	0.27628
585574.60	4127843.35	0.35466	585599.60	4127843.35	0.46228
585624.60	4127843.35	0.61515	585324.60	4127868.35	0.08858
585349.60	4127868.35	0.09783	585374.60	4127868.35	0.10872
585399.60	4127868.35	0.12179	585424.60	4127868.35	0.13809
585449.60	4127868.35	0.15833	585474.60	4127868.35	0.18507
585499.60	4127868.35	0.22121	585524.60	4127868.35	0.27100
585549.60	4127868.35	0.33912	585574.60	4127868.35	0.45396
585599.60	4127868.35	0.63849	585624.60	4127868.35	0.94028
585324.60	4127893.35	0.09774	585524.60	4127893.35	0.32483
585549.60	4127893.35	0.42209	585574.60	4127893.35	0.59103
585599.60	4127893.35	0.92163	585624.60	4127893.35	1.67614
585324.60	4127918.35	0.10833	585349.60	4127918.35	0.12208
585374.60	4127918.35	0.13761	585399.60	4127918.35	0.15578
585424.60	4127918.35	0.18003	585449.60	4127918.35	0.21145
585474.60	4127918.35	0.25133	585499.60	4127918.35	0.30740
585524.60	4127918.35	0.39082	585324.60	4127943.35	0.12075
585349.60	4127943.35	0.13652	585374.60	4127943.35	0.15483
585399.60	4127943.35	0.17662	585424.60	4127943.35	0.20600
585449.60	4127943.35	0.24252	585474.60	4127943.35	0.29151
585499.60	4127943.35	0.35885	585524.60	4127943.35	0.46266
585549.60	4127943.35	0.63151	585574.60	4127943.35	0.93364
585599.60	4127943.35	1.57233	585624.60	4127943.35	3.03245
585324.60	4127968.35	0.13388	585349.60	4127968.35	0.15176
585374.60	4127968.35	0.17318	585399.60	4127968.35	0.19934

**Model Output**  
**Unit Emission Rates (1 g/s)**

585424.60	4127968.35	0.23161	585449.60	4127968.35	0.27323
585474.60	4127968.35	0.32683	585499.60	4127968.35	0.40464
585524.60	4127968.35	0.51736	585549.60	4127968.35	0.68197
585574.60	4127968.35	0.94904	585599.60	4127968.35	1.36684
585624.60	4127968.35	1.94967	585324.60	4127993.35	0.14692
585349.60	4127993.35	0.16698	585374.60	4127993.35	0.19126
585399.60	4127993.35	0.21912	585424.60	4127993.35	0.25237
585449.60	4127993.35	0.29699	585474.60	4127993.35	0.35532
585499.60	4127993.35	0.43216	585524.60	4127993.35	0.53379
585549.60	4127993.35	0.67812	585574.60	4127993.35	0.87916
585599.60	4127993.35	1.13631	585624.60	4127993.35	1.44782
585324.60	4128018.35	0.15954	585349.60	4128018.35	0.18128

\*\*\* AERMOD - VERSION 21112 \*\*\* \*\*\* 1655 S. De Anza Blvd, Cupertino, CA \*\*\* 04/20/22  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\* Construction HRA \*\*\* 12:51:49  
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\*\*\* MODELOPTs: RegDFault CONC ELEV FLGPOL URBAN

*** THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: HAUL ***					
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,					
L0000006 ,	L0000007 ,	L0000008 ,	L0000009 ,	L0000010 ,	L0000011 , L0000012 , L0000013 ,
L0000014 ,	L0000015 ,	L0000016 ,	L0000017 ,	L0000018 ,	L0000019 , L0000020 , L0000021 ,
L0000022 ,	L0000023 ,	L0000024 ,	L0000025 ,	L0000026 ,	L0000027 , L0000028 , . . . ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585374.60	4128018.35	0.20757	585399.60	4128018.35	0.23722
585424.60	4128018.35	0.27178	585449.60	4128018.35	0.31708
585474.60	4128018.35	0.37423	585499.60	4128018.35	0.44231
585524.60	4128018.35	0.53130	585549.60	4128018.35	0.64809
585574.60	4128018.35	0.79896	585599.60	4128018.35	0.98175
585624.60	4128018.35	1.19581 MEIR	585324.60	4128043.35	0.17229
585349.60	4128043.35	0.19510	585374.60	4128043.35	0.22253
585399.60	4128043.35	0.25036	585424.60	4128043.35	0.28476
585449.60	4128043.35	0.32870	585474.60	4128043.35	0.38543
585499.60	4128043.35	0.43946	585524.60	4128043.35	0.51954
585549.60	4128043.35	0.61620	585574.60	4128043.35	0.73918
585599.60	4128043.35	0.88796	585624.60	4128043.35	1.06928
585324.60	4128068.35	0.18335	585349.60	4128068.35	0.20689
585374.60	4128068.35	0.23225	585399.60	4128068.35	0.25996
585424.60	4128068.35	0.29345	585449.60	4128068.35	0.33760
585474.60	4128068.35	0.38813	585499.60	4128068.35	0.43497
585524.60	4128068.35	0.50597	585549.60	4128068.35	0.59071
585574.60	4128068.35	0.69825	585599.60	4128068.35	0.83465
585624.60	4128068.35	1.00608	585324.60	4128093.35	0.19272
585349.60	4128093.35	0.21637	585374.60	4128093.35	0.24145
585399.60	4128093.35	0.26642	585424.60	4128093.35	0.30082
585449.60	4128093.35	0.34061	585474.60	4128093.35	0.38572

## Model Output Unit Emission Rates (1 g/s)

585499.60	4128093.35	0.42923	585524.60	4128093.35	0.49415
585549.60	4128093.35	0.57236	585574.60	4128093.35	0.67181
585599.60	4128093.35	0.80061	585624.60	4128093.35	0.96778
585324.60	4128118.35	0.20057	585349.60	4128118.35	0.22387
585374.60	4128118.35	0.24630	585399.60	4128118.35	0.27271
585424.60	4128118.35	0.30382	585449.60	4128118.35	0.34383
585474.60	4128118.35	0.38063	585499.60	4128118.35	0.42375
585524.60	4128118.35	0.48554	585549.60	4128118.35	0.55886
585574.60	4128118.35	0.65506	585599.60	4128118.35	0.77770
585624.60	4128118.35	0.94328	585324.60	4128143.35	0.20695
585349.60	4128143.35	0.22601	585374.60	4128143.35	0.24816
585399.60	4128143.35	0.27574	585424.60	4128143.35	0.30575
585449.60	4128143.35	0.34206	585474.60	4128143.35	0.37736
585499.60	4128143.35	0.41971	585524.60	4128143.35	0.47752
585549.60	4128143.35	0.54925	585574.60	4128143.35	0.64296
585599.60	4128143.35	0.76317	585624.60	4128143.35	0.92544
585324.60	4128168.35	0.21178	585349.60	4128168.35	0.23060
585374.60	4128168.35	0.25396	585399.60	4128168.35	0.27907

\*\*\* MODELOPTs: RegDEFAULT CONC ELEV FLGPOL URBAN

\*\*\* THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: HAUL \*\*\*  
 INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005  
 L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013  
 L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021  
 L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . .

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*\*3

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585424.60	4128168.35	0.30669	585449.60	4128168.35	0.34208
585474.60	4128168.35	0.37619	585499.60	4128168.35	0.41632
585524.60	4128168.35	0.47210	585549.60	4128168.35	0.54272
585574.60	4128168.35	0.63382	585599.60	4128168.35	0.75274
585624.60	4128168.35	0.91312	585324.60	4128193.35	0.21559
585349.60	4128193.35	0.23412	585374.60	4128193.35	0.25542
585399.60	4128193.35	0.28162	585424.60	4128193.35	0.30877
585449.60	4128193.35	0.34191	585474.60	4128193.35	0.37525
585499.60	4128193.35	0.41239	585524.60	4128193.35	0.46740
585549.60	4128193.35	0.53811	585574.60	4128193.35	0.62743
585599.60	4128193.35	0.74540	585624.60	4128193.35	0.90421
585324.60	4128218.35	0.21708	585349.60	4128218.35	0.23542
585374.60	4128218.35	0.25788	585399.60	4128218.35	0.28217
585424.60	4128218.35	0.30907	585449.60	4128218.35	0.34157
585474.60	4128218.35	0.37440	585499.60	4128218.35	0.40998
585524.60	4128218.35	0.46386	585549.60	4128218.35	0.53320

**Model Output**  
**Unit Emission Rates (1 g/s)**

585574.60	4128218.35	0.62193	585599.60	4128218.35	0.73833
585624.60	4128218.35	0.89540	585324.60	4128243.35	0.21808
585349.60	4128243.35	0.23626	585374.60	4128243.35	0.25835
585399.60	4128243.35	0.28363	585424.60	4128243.35	0.30758
585449.60	4128243.35	0.33942	585474.60	4128243.35	0.37549
585499.60	4128243.35	0.40635	585524.60	4128243.35	0.46140
585549.60	4128243.35	0.52964	585574.60	4128243.35	0.61696
585599.60	4128243.35	0.73213	585624.60	4128243.35	0.89017
585324.60	4128268.35	0.22103	585349.60	4128268.35	0.23784
585374.60	4128268.35	0.25958	585399.60	4128268.35	0.28444
585424.60	4128268.35	0.30844	585449.60	4128268.35	0.33870
585474.60	4128268.35	0.37429	585499.60	4128268.35	0.40376
585524.60	4128268.35	0.45810	585549.60	4128268.35	0.52589
585574.60	4128268.35	0.61216	585599.60	4128268.35	0.72563
585624.60	4128268.35	0.88615	585324.60	4128293.35	0.22106
585349.60	4128293.35	0.23778	585374.60	4128293.35	0.25922
585399.60	4128293.35	0.28480	585424.60	4128293.35	0.30751
585449.60	4128293.35	0.33593	585474.60	4128293.35	0.37262
585499.60	4128293.35	0.40212	585524.60	4128293.35	0.45448
585549.60	4128293.35	0.52227	585574.60	4128293.35	0.60606
585599.60	4128293.35	0.71805	585624.60	4128293.35	0.87683
585324.60	4128318.35	0.21977	585349.60	4128318.35	0.23733
585374.60	4128318.35	0.25749	585399.60	4128318.35	0.28263
585424.60	4128318.35	0.30489	585449.60	4128318.35	0.33427

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION				VALUES FOR SOURCE GROUP: HAUL				***	
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005				, L00000009 , L0000010 , L0000011 , L0000012 , L0000013				,	
L00000006	, L0000007	, L0000008	, L0000009	, L0000010	, L0000011	, L0000012	, L0000013	,	
L00000014	, L0000015	, L0000016	, L0000017	, L0000018	, L0000019	, L0000020	, L0000021	,	
L00000022	, L0000023	, L0000024	, L0000025	, L0000026	, L0000027	, L0000028	, . . .	,	

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*3 \*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585474.60	4128318.35	0.37032	585499.60	4128318.35	0.40037
585524.60	4128318.35	0.45037	585549.60	4128318.35	0.51601
585574.60	4128318.35	0.59867	585599.60	4128318.35	0.70888
585624.60	4128318.35	0.86501	585324.60	4128343.35	0.22011
585349.60	4128343.35	0.23738	585374.60	4128343.35	0.25344
585399.60	4128343.35	0.27913	585424.60	4128343.35	0.30170
585449.60	4128343.35	0.33183	585474.60	4128343.35	0.36886
585499.60	4128343.35	0.40054	585524.60	4128343.35	0.44688
585549.60	4128343.35	0.50929	585574.60	4128343.35	0.58996
585599.60	4128343.35	0.69815	585624.60	4128343.35	0.85841

**Model Output**  
**Unit Emission Rates (1 g/s)**

585324.60	4128368.35	0.21901	585349.60	4128368.35	0.23436
585374.60	4128368.35	0.25080	585399.60	4128368.35	0.27492
585424.60	4128368.35	0.29911	585449.60	4128368.35	0.33003
585474.60	4128368.35	0.36636	585499.60	4128368.35	0.39557
585524.60	4128368.35	0.44042	585549.60	4128368.35	0.49940
585574.60	4128368.35	0.57830	585599.60	4128368.35	0.69051
585624.60	4128368.35	0.84358	585324.60	4128393.35	0.21499
585349.60	4128393.35	0.22892	585374.60	4128393.35	0.24858
585399.60	4128393.35	0.27318	585424.60	4128393.35	0.29691
585449.60	4128393.35	0.32572	585474.60	4128393.35	0.36114
585499.60	4128393.35	0.38727	585524.60	4128393.35	0.42837
585549.60	4128393.35	0.48574	585574.60	4128393.35	0.56716
585599.60	4128393.35	0.67424	585624.60	4128393.35	0.82258
585846.43	4127690.58	0.41563	585871.43	4127690.58	0.44332
585896.43	4127690.58	0.46499	585921.43	4127690.58	0.48020
585946.43	4127690.58	0.48928	585971.43	4127690.58	0.49262
585996.43	4127690.58	0.49142	586021.43	4127690.58	0.48490
586046.43	4127690.58	0.47482	585846.43	4127715.58	0.51878
585871.43	4127715.58	0.54816	585896.43	4127715.58	0.56865
585921.43	4127715.58	0.58028	585946.43	4127715.58	0.58331
585971.43	4127715.58	0.57888	585996.43	4127715.58	0.57021
586021.43	4127715.58	0.55646	586046.43	4127715.58	0.53858
585846.43	4127740.58	0.65842	585871.43	4127740.58	0.68680
585896.43	4127740.58	0.70260	585921.43	4127740.58	0.70600
585946.43	4127740.58	0.69759	585971.43	4127740.58	0.68145
585996.43	4127740.58	0.66173	586021.43	4127740.58	0.63671
586046.43	4127740.58	0.60809	585846.43	4127765.58	0.85144
585871.43	4127765.58	0.87196	585896.43	4127765.58	0.87503
585921.43	4127765.58	0.86186	585946.43	4127765.58	0.83478
585971.43	4127765.58	0.80028	585996.43	4127765.58	0.76371

## Model Output Unit Emission Rates (1 g/s)

\*\*\* MODELOPTs: ReqDEFAULT CONC ELEV FLGPOL URBAN

\*\*\* THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: HAUL \*\*\*  
 INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005  
 L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013  
 L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021  
 L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . .

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*3

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
586021.43	4127765.58	0.72283	586046.43	4127765.58	0.68024
585846.43	4127790.58	1.12412	585871.43	4127790.58	1.12116
585896.43	4127790.58	1.09463	585921.43	4127790.58	1.05092
585946.43	4127790.58	0.99333	585971.43	4127790.58	0.93130
585996.43	4127790.58	0.87135	586021.43	4127790.58	0.81020
586046.43	4127790.58	0.75082	585846.43	4127815.58	1.51187
585871.43	4127815.58	1.45614	585896.43	4127815.58	1.36855
585921.43	4127815.58	1.26971	585946.43	4127815.58	1.16582
585971.43	4127815.58	1.06585	585996.43	4127815.58	0.97630
586021.43	4127815.58	0.89209	586046.43	4127815.58	0.81466
585846.43	4127840.58	2.05282	585871.43	4127840.58	1.88513
585896.43	4127840.58	1.68807	585921.43	4127840.58	1.50446
585946.43	4127840.58	1.33627	585971.43	4127840.58	1.19025
585996.43	4127840.58	1.06817	586021.43	4127840.58	0.96088
586046.43	4127840.58	0.86679	585871.43	4127865.58	2.36350
585896.43	4127865.58	2.00774	585921.43	4127865.58	1.71561
585946.43	4127865.58	1.48026	585971.43	4127865.58	1.29115
585996.43	4127865.58	1.13837	586021.43	4127865.58	1.01150
586046.43	4127865.58	0.90472	585871.43	4127890.58	2.76511
585896.43	4127890.58	2.24647	585921.43	4127890.58	1.86845
585946.43	4127890.58	1.58404	585971.43	4127890.58	1.36200
585996.43	4127890.58	1.18636	586021.43	4127890.58	1.04495
586046.43	4127890.58	0.92887	585872.64	4127908.32	2.90416 CREC
585897.64	4127908.32	2.31900	585921.43	4127915.58	1.94164
585946.43	4127915.58	1.63206	585971.43	4127915.58	1.39540
585996.43	4127915.58	1.20992	586021.43	4127915.58	1.06136
586046.43	4127915.58	0.94032	585966.56	4127949.72	1.44500
585991.56	4127949.72	1.24958	586016.56	4127949.72	1.09296
586041.56	4127949.72	0.96457	585966.56	4127974.72	1.44334
585991.56	4127974.72	1.24864	586016.56	4127974.72	1.09163
586041.56	4127974.72	0.96195	585966.56	4127999.72	1.44135
585991.56	4127999.72	1.24559	586016.56	4127999.72	1.08797
586041.56	4127999.72	0.95791	585966.56	4128024.72	1.43361
585991.56	4128024.72	1.23550	586016.56	4128024.72	1.08093

**Model Output**  
**Unit Emission Rates (1 g/s)**

586041.56	4128024.72	0.95369	585966.56	4128049.72	1.42500
585991.56	4128049.72	1.23108	586016.56	4128049.72	1.07534
586041.56	4128049.72	0.94837	585966.56	4128074.72	1.42514
585991.56	4128074.72	1.22484	586016.56	4128074.72	1.06839
586041.56	4128074.72	0.94131	585891.56	4128099.72	2.51422
585916.56	4128099.72	2.03832	585941.56	4128099.72	1.69668

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: HAUL ***						
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,						
L0000006	, L0000007	, L0000008	, L0000009	, L0000010	, L0000011	, L0000012 , L0000013 ,
L0000014	, L0000015	, L0000016	, L0000017	, L0000018	, L0000019	, L0000020 , L0000021 ,
L0000022	, L0000023	, L0000024	, L0000025	, L0000026	, L0000027	, L0000028 , . . . ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*3 \*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585966.56	4128099.72	1.42482	585991.56	4128099.72	1.21680
586016.56	4128099.72	1.05848	586041.56	4128099.72	0.93108
585891.56	4128124.72	2.50307	585916.56	4128124.72	2.02762
585941.56	4128124.72	1.68523	585966.56	4128124.72	1.41872
585991.56	4128124.72	1.20657	586016.56	4128124.72	1.04591
586041.56	4128124.72	0.91658	585891.56	4128149.72	2.48826
585916.56	4128149.72	2.01485	585941.56	4128149.72	1.67177
585966.56	4128149.72	1.41034	585991.56	4128149.72	1.19864
586016.56	4128149.72	1.03034	586041.56	4128149.72	0.89897
585891.56	4128174.72	2.47524	585916.56	4128174.72	1.99973
585941.56	4128174.72	1.65540	585966.56	4128174.72	1.39297
585991.56	4128174.72	1.18502	586016.56	4128174.72	1.01153
586041.56	4128174.72	0.87851	585891.56	4128199.72	2.45379
585916.56	4128199.72	1.97660	585941.56	4128199.72	1.63058
585966.56	4128199.72	1.36638	585991.56	4128199.72	1.15929
586016.56	4128199.72	0.98877	586041.56	4128199.72	0.85412
585866.56	4128224.72	3.11785	585891.56	4128224.72	2.42096
585916.56	4128224.72	1.94329	585941.56	4128224.72	1.59505
585966.56	4128224.72	1.33036	585991.56	4128224.72	1.12583
586016.56	4128224.72	0.95901	586041.56	4128224.72	0.82437
585866.56	4128249.72	3.07253	585891.56	4128249.72	2.37655
585916.56	4128249.72	1.89890	585941.56	4128249.72	1.55110
585966.56	4128249.72	1.28748	585991.56	4128249.72	1.08449
586016.56	4128249.72	0.92067	586041.56	4128249.72	0.78829
585866.56	4128274.72	3.01640	585891.56	4128274.72	2.32071
585916.56	4128274.72	1.84318	585941.56	4128274.72	1.49926
585966.56	4128274.72	1.23814	585991.56	4128274.72	1.03416
586016.56	4128274.72	0.87349	586041.56	4128274.72	0.74500

## Model Output Unit Emission Rates (1 g/s)

585866.56	4128299.72	2.96262	Bright Horizons	585891.56	4128299.72	2.26374
585916.56	4128299.72	1.78386		585941.56	4128299.72	1.43820
585966.56	4128299.72	1.17662		585991.56	4128299.72	0.97394
586016.56	4128299.72	0.81805		586041.56	4128299.72	0.69398
585866.56	4128324.72	2.86412		585891.56	4128324.72	2.16981
585916.56	4128324.72	1.69504		585941.56	4128324.72	1.35172
585966.56	4128324.72	1.09437		585991.56	4128324.72	0.90192
586016.56	4128324.72	0.75285		586041.56	4128324.72	0.63570
585681.73	4128195.37	1.66756	De Anza Blvd KC	585701.73	4128195.37	2.22375
585721.73	4128195.37	3.20756		585681.73	4128215.37	1.65666
585701.73	4128215.37	2.20916		585721.73	4128215.37	3.19075
585681.73	4128235.37	1.65267		585701.73	4128235.37	2.20411

\*\*\* MODELOPTs: ReqDFAULT CONC ELEV FLGPOL URBAN

\*\*\* THE PERIOD ( 43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: HAUL \*\*\*  
 INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005  
 L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013  
 L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021  
 L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . .

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*3

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
585721.73	4128235.37	3.18885	585796.83	4127858.26	2.98475
585796.83	4127883.26	4.91824	585798.03	4127901.01	7.13153 Growing Tree
585810.13	4127861.09	3.05229	585810.13	4127886.09	4.73567
585811.34	4127903.83	6.16277			

**Model Output**  
**Unit Emission Rates (1 g/s)**

\*\*\* AERMOD - VERSION 21112 \*\*\*    \*\*\* 1655 S. De Anza Blvd, Cupertino, CA  
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\*\*\* MODELOPTS:    RegDEFAULT    CONC    ELEV    FLGPOL    URBAN

\*\*\* THE SUMMARY OF MAXIMUM PERIOD ( 43872 HRS) RESULTS \*\*\*

\*\* CONC OF OTHER       IN MICROGRAMS/M\*\*3

\*\*

GROUP ID	AVERAGE CONC	RECEPTOR	(XR, YR, ZELEV, ZHILL, ZFLAG)	NETWORK		
				OF TYPE	GRID-ID	
MEIR Location						
ONSITE	1ST HIGHEST VALUE IS	15.48257 AT ( 585624.60, 4128018.35,	95.04,	95.04,	1.50)	DC
	2ND HIGHEST VALUE IS	14.57708 AT ( 585624.60, 4127993.35,	95.22,	95.22,	1.50)	DC
	3RD HIGHEST VALUE IS	11.43746 AT ( 585624.60, 4127968.35,	95.47,	95.47,	1.50)	DC
	4TH HIGHEST VALUE IS	9.55422 AT ( 585624.60, 4128043.35,	94.71,	94.71,	1.50)	DC
	5TH HIGHEST VALUE IS	7.94945 AT ( 585599.60, 4128018.35,	95.02,	95.02,	1.50)	DC
	6TH HIGHEST VALUE IS	7.72748 AT ( 585798.03, 4127901.01,	92.88,	92.88,	1.50)	DC
	7TH HIGHEST VALUE IS	7.42649 AT ( 585811.34, 4127903.83,	92.73,	92.73,	1.50)	DC
	8TH HIGHEST VALUE IS	7.05703 AT ( 585599.60, 4127993.35,	95.32,	95.32,	1.50)	DC
	9TH HIGHEST VALUE IS	6.73332 AT ( 585624.60, 4127943.35,	95.48,	95.48,	1.50)	DC
	10TH HIGHEST VALUE IS	6.66256 AT ( 585599.60, 4128043.35,	94.70,	94.70,	1.50)	DC
HAUL	1ST HIGHEST VALUE IS	7.13153 AT ( 585798.03, 4127901.01,	92.88,	92.88,	1.50)	DC
	2ND HIGHEST VALUE IS	6.16277 AT ( 585811.34, 4127903.83,	92.73,	92.73,	1.50)	DC
	3RD HIGHEST VALUE IS	4.91824 AT ( 585796.83, 4127883.26,	93.05,	93.05,	1.50)	DC
	4TH HIGHEST VALUE IS	4.73567 AT ( 585810.13, 4127886.09,	92.92,	92.92,	1.50)	DC
	5TH HIGHEST VALUE IS	3.20756 AT ( 585721.73, 4128195.37,	91.76,	91.76,	1.50)	DC
	6TH HIGHEST VALUE IS	3.19075 AT ( 585721.73, 4128215.37,	91.72,	91.72,	1.50)	DC
	7TH HIGHEST VALUE IS	3.18885 AT ( 585721.73, 4128235.37,	91.56,	91.56,	1.50)	DC
	8TH HIGHEST VALUE IS	3.11785 AT ( 585866.56, 4128224.72,	89.85,	89.85,	1.50)	DC
	9TH HIGHEST VALUE IS	3.07253 AT ( 585866.56, 4128249.72,	89.56,	89.56,	1.50)	DC
	10TH HIGHEST VALUE IS	3.05229 AT ( 585810.13, 4127861.09,	93.11,	93.11,	1.50)	DC

\*\*\* RECEPTOR TYPES:    GC = GRIDCART  
 GP = GRIDPOLR  
 DC = DISCCART  
 DP = DISCPOLR

**Model Output**  
**Unit Emission Rates (1 g/s)**

\*\*\* AERMOD - VERSION 21112 \*\*\*    \*\*\* 1655 S. De Anza Blvd, Cupertino, CA  
\*\*\* AERMET - VERSION 14134 \*\*\*    \*\*\* Construction HRA

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\*\*\* MODELOPTs:    RegDFAULT CONC ELEV FLGPOL URBAN

\*\*\* Message Summary : AERMOD Model Execution \*\*\*

----- Summary of Total Messages -----

A Total of                0 Fatal Error Message(s)  
A Total of                0 Warning Message(s)  
A Total of                13130 Informational Message(s)

A Total of                43872 Hours Were Processed

A Total of                11611 Calm Hours Identified

A Total of                1519 Missing Hours Identified ( 3.46 Percent)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\*    NONE    \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
\*\*\*    NONE    \*\*\*

\*\*\*\*\*  
\*\*\* AERMOD Finishes Successfully \*\*\*  
\*\*\*\*\*

## **Appendix C. Construction Risk Calculations**

**Table C1**  
**Concentrations for Risk Calculations**  
**MEIR and Maximum Exposed Preschool**

Contaminant ( a )	Source ( b )	Model Output <sup>1</sup> ( $\mu\text{g}/\text{m}^3$ ) ( c )	Emission Rates <sup>2</sup> (g/s) ( d )	MEIR Conc. ( $\mu\text{g}/\text{m}^3$ ) ( e )	Total MEIR Conc. Annual Average ( $\mu\text{g}/\text{m}^3$ ) ( f )
<b>Residential Receptors</b> with SEPR Section 17.04 (Tier 4 Interim Engines for Eq > 25hp)					
DPM	2022	On-Site Emissions	15.48	7.66E-04	1.19E-02
		Truck Route	1.20	2.80E-06	3.35E-06
2023	On-Site Emissions	15.48	2.50E-03	3.87E-02	3.87E-02
	Truck Route	1.20	1.77E-06	2.12E-06	
2024	On-Site Emissions	15.48	2.73E-03	4.23E-02	4.23E-02
	Truck Route	1.20	1.94E-06	2.32E-06	
PM2.5	2022	On-Site Emissions	15.48	7.66E-04	1.19E-02
		Truck Route	1.20	2.71E-06	3.24E-06
2023	On-Site Emissions	15.48	2.50E-03	3.87E-02	3.87E-02
	Truck Route	1.20	1.67E-06	1.99E-06	
2024	On-Site Emissions	15.48	2.73E-03	4.23E-02	4.23E-02
	Truck Route	1.20	1.79E-06	2.14E-06	
					Max PM2.5 0.04

Maximum Exposed Individual Resident (MEIR) UTM coordinates: 585624.6 E, 4128018.35 N

Growing Tree Learning with SEPR Section 17.04 (Tier 4 Interim Engines for Eq > 25hp)						
Contaminant	Year	Source	Model Output <sup>1</sup> ( $\mu\text{g}/\text{m}^3$ )	Emission Rates <sup>2</sup> (g/s)	MEIR Conc. ( $\mu\text{g}/\text{m}^3$ )	Total MEIR Conc. Annual Average ( $\mu\text{g}/\text{m}^3$ )
DPM	2022	On-Site Emissions	7.73	7.66E-04	5.92E-03	5.94E-03
		Truck Route	7.13	2.80E-06	2.00E-05	
2023	On-Site Emissions	7.73	2.50E-03	1.93E-02	1.93E-02	
	Truck Route	7.13	1.77E-06	1.26E-05		
2024	On-Site Emissions	7.73	2.73E-03	2.11E-02	2.11E-02	
	Truck Route	7.13	1.94E-06	1.38E-05		
PM2.5	2022	On-Site Emissions	7.73	7.66E-04	5.92E-03	5.94E-03
		Truck Route	7.13	2.71E-06	1.93E-05	
2023	On-Site Emissions	7.73	2.50E-03	1.93E-02	1.93E-02	
	Truck Route	7.13	1.67E-06	1.19E-05		
2024	On-Site Emissions	7.73	2.73E-03	2.11E-02	2.11E-02	
	Truck Route	7.13	1.79E-06	1.28E-05		
					Max PM2.5 0.02	

Maximum Exposed Growing Tree Receptor UTM coordinates: 585798.03 E, 4127901.01 N

Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations

<sup>1</sup> Model Output at the MEIR and maximum exposed school receptor based on unit emission rates for sources (1 g/s).

<sup>2</sup> From Emission Rate Calculations (Appendix A - Construction Emissions).

Note: The maximum exposed receptor location is the receptor location associated with the maximum AERMOD predicted DPM concentrations from the on-site emission source because the calculated on-site emission rates are approximately 2 to 3 orders of magnitude higher than the calculated off-site emission rates [see column (d)]. Therefore, the maximum concentrations associated with the on-site emission sources produce the highest overall ground-level maximum exposed receptor concentrations and, consequently, highest calculated health risks.

**Table C2**  
**Concentrations for Risk Calculations**  
**Additional Childcare Facilities**

Contaminant ( a )	Source ( b )	Model Output <sup>1</sup> ( µg/m <sup>3</sup> ) ( c )	Emission Rates <sup>2</sup> ( g/s ) ( d )	MEIR Conc. ( µg/m <sup>3</sup> ) ( e )	Total MEIR Conc. Annual Average ( µg/m <sup>3</sup> ) ( f )
<b>Christian Righteousness Education Center (CREC)</b> <b>with Tier 4 Interim Engines for Eq &gt; 25hp</b>					
DPM	2022	On-Site Emissions	4.86	7.66E-04	3.72E-03
		Truck Route	2.90	2.80E-06	8.13E-06
	2023	On-Site Emissions	4.86	2.50E-03	1.21E-02
		Truck Route	2.90	1.77E-06	5.14E-06
PM2.5	2022	On-Site Emissions	4.86	2.73E-03	1.33E-02
		Truck Route	2.90	1.94E-06	5.64E-06
	2023	On-Site Emissions	4.86	2.50E-03	1.21E-02
		Truck Route	2.90	1.67E-06	4.84E-06
	2024	On-Site Emissions	4.86	2.73E-03	1.33E-02
		Truck Route	2.90	1.79E-06	5.20E-06
					Max PM2.5 0.01

Maximum Exposed CREC Receptor UTM coordinates: 585872.64 E, 4127908.32 N

De Anza Boulevard KinderCare			with Tier 4 Interim Engines for Eq > 25hp		
DPM	2022	On-Site Emissions	0.85	7.66E-04	6.47E-04
		Truck Route	1.67	2.80E-06	4.67E-06
	2023	On-Site Emissions	0.85	2.50E-03	2.11E-03
		Truck Route	1.67	1.77E-06	2.95E-06
PM2.5	2022	On-Site Emissions	0.85	2.73E-03	2.31E-03
		Truck Route	1.67	1.94E-06	3.24E-06
	2023	On-Site Emissions	0.85	2.50E-03	2.11E-03
		Truck Route	1.67	1.67E-06	2.78E-06
	2024	On-Site Emissions	0.85	2.73E-03	2.31E-03
		Truck Route	1.67	1.79E-06	2.99E-06
					Max PM2.5 0.00

Maximum Exposed De Anza Blvd KinderCare Receptor UTM coordinates: 585681.73 E, 4128195.37 N

Bright Horizons at Silicon Valley			with Tier 4 Interim Engines for Eq > 25hp		
DPM	2022	On-Site Emissions	0.16	7.66E-04	1.22E-04
		Truck Route	2.96	2.80E-06	8.30E-06
	2023	On-Site Emissions	0.85	2.50E-03	2.11E-03
		Truck Route	1.67	1.77E-06	2.95E-06
PM2.5	2022	On-Site Emissions	0.85	2.73E-03	2.31E-03
		Truck Route	1.67	1.94E-06	3.24E-06
	2023	On-Site Emissions	0.85	2.50E-03	2.11E-03
		Truck Route	1.67	1.67E-06	2.78E-06
	2024	On-Site Emissions	0.85	2.73E-03	2.31E-03
		Truck Route	1.67	1.79E-06	2.99E-06
					Max PM2.5 0.00

Maximum Exposed De Anza Blvd KinderCare Receptor UTM coordinates: 585866.56 E, 4128299.72 N

Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations

<sup>1</sup> Model Output at the MEIR and maximum exposed school receptor based on unit emission rates for sources (1 g/s).

<sup>2</sup> From Emission Rate Calculations (Appendix A - Construction Emissions).

Note: The maximum exposed receptor location is the receptor location associated with the maximum AERMOD predicted DPM concentrations from the on-site emission source because the calculated on-site emission rates are approximately 2 to 3 orders of magnitude higher than the calculated off-site emission rates [see column (d)].

Therefore, the maximum concentrations associated with the on-site emission sources produce the highest overall ground-level maximum exposed receptor concentrations and, consequently, highest calculated health risks.

**Table C3**  
**Residential Health Risk Calculations**

Source ( a )	MEIR Conc. ( $\mu\text{g}/\text{m}^3$ ) ( b )	Weight Fraction ( c )	Contaminant ( d )	URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup> ( e )	CPF (mg/kg/day) <sup>-1</sup> ( f )	Dose (by age bin)		Carcinogenic Risks (by age bin)		Total Cancer Risk per million ( m )	Chronic Hazards <sup>3</sup> REL ( $\mu\text{g}/\text{m}^3$ ) ( n )	
						3rd Trimester	0 < 2 years	3rd Trimester	0 < 2 years		RESP ( o )	
						(mg/kg-day) ( g )	(mg/kg-day) ( h )	per million ( j )	per million ( k )			
<b>Maximum Exposed Individual Resident (MEIR)</b>												
2022	On & Off-Site Emissions	1.19E-02	1.0E+00	DPM	3.0E-04	1.1E+00	4.10E-06	1.24E-05	1.31E-01	4.25E-02	0.2	5.0E+00 7.74E-03 8.45E-03
2023		3.87E-02						4.05E-05		5.12E+00	5.1	
2024		4.23E-02						4.42E-05		9.68E-01	1.0	
										Total	6.3	0.019

Maximum Exposed Individual Resident (MEIR) UTM coordinates: 585624.6 E, 4128018.35 N

Dose Exposure Factors:	OEHHA age bin exposure year(s)	3rd Trimester 2022	0 < 2 years 2022-2024	<sup>1</sup> Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015).
	exposure frequency (days/year)	350	350	
	inhalation rate (L/kg-day) <sup>1</sup>	361	1090	<sup>2</sup> Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).
	inhalation absorption factor	1	1	
	conversion factor (mg/ $\mu\text{g}$ ; $\text{m}^3/\text{L}$ )	1.0E-06	1.0E-06	<sup>3</sup> Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.
Risk Calculation Factors:	age sensitivity factor	10	10	
	averaging time (years)	70	70	
	per million	1.0E+06	1.0E+06	
	fraction of time at home	0.85	0.85	
exposure durations per age bin		exposure durations (year)		
Construction Year		Const Duration <sup>2</sup>	3rd Trimester	0 < 2 years
2022		0.28	0.25	0.03
2023		1.0		1.0
2024		0.17		0.17
Total		1.44	0.25	1.2

**Table C4**  
**Health Risk Calculations**  
**Growing Tree**

Source ( a )	MEIR Conc. ( $\mu\text{g}/\text{m}^3$ ) ( b )	Weight Fraction ( c )	Contaminant ( d )	URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup> ( e )	CPF (mg/kg/day) <sup>-1</sup> ( f )	Dose (by age bin)		Carcinogenic Risks (by age bin)		<b>Total Cancer Risk</b> per million ( m )	<b>Chronic Hazards<sup>3</sup></b>		
						3rd Trimester	0 < 2 years	3rd Trimester	0 < 2 years		REL ( $\mu\text{g}/\text{m}^3$ ) ( n )	RESP ( o )	
						(mg/kg-day) ( g )	(mg/kg-day) ( h )	per million ( j )	per million ( k )				
<b>Growing Tree</b>													
2022	On & Off-Site Emissions	5.94E-03	1.0E+00	DPM	3.0E-04	1.1E+00	4.88E-06		2.03E-01		0.2	5.0E+00	1.19E-03
2023		1.93E-02					1.59E-05	8.48E-06	5.32E-01	2.93E-01	0.8		3.87E-03
2024		2.11E-02						9.25E-06		7.15E-02	0.1		4.22E-03
										<b>Total</b>	<b>1.1</b>		<b>0.009</b>

Growing Tree Ages OEHHA age bin exposure year(s)	18 mo to 6 years		<sup>1</sup> Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015).
	0 < 2 years	2 < 9 years	
	2022	2022-2024	
Dose Exposure Factors:			
exposure frequency (days/year)	250	250	
inhalation rate (L/kg-day) <sup>1</sup>	1200	640	
inhalation absorption factor	1	1	
conversion factor (mg/ $\mu\text{g}$ ; $\text{m}^3/\text{L}$ )	1.0E-06	1.0E-06	
Risk Calculation Factors:			
age sensitivity factor	10	3	
averaging time (years)	70	70	
per million	1.0E+06	1.0E+06	
exposure durations per age bin	exposure durations (year)		
	Construction Year	Const Duration <sup>2</sup>	1.5 < 2 years    2 < 9 years
	2022	0.28	0.28
	2023	1.0	0.22    0.77
	2024	0.17	
	Total	1.44	0.50    0.94

<sup>1</sup> Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015).

<sup>2</sup> Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

<sup>3</sup> Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.

Note: Growing Tree accepts children ages 18 mo thru TK

**Table C5**  
**Health Risk Calculations**  
**Christian Righteousness Education Center**

Source (a)	MER Conc. ( $\mu\text{g}/\text{m}^3$ ) (b)	Weight Fraction (c)	Contaminant (d)	URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup> (e)	CPF (mg/kg/day) <sup>-1</sup> (f)	Dose (by age bin)	Exposure Duration <sup>2</sup> (yr) (h)	Cancer Risk	Chronic Hazards <sup>3</sup>		
						2 < 16 years		2 < 16 years	REL ( $\mu\text{g}/\text{m}^3$ ) (j)	RESP (k)	
						(mg/kg-day) (g)		per million (i)			
<b>CREC Preschool Receptors</b>											
2022	On & Off-Site Emissions	3.73E-03	1.0E+00	DPM	3.0E-04	1.1E+00	1.63E-06	0.28	0.02	5.0E+00	7.45E-04
2023		1.21E-02					5.32E-06	1.0	0.24		2.43E-03
2024		1.33E-02					5.81E-06	0.17	0.04		2.65E-03
								Total	0.3		0.006

CREC Ages  
OEHHA age bin  
exposure year(s)

5 to 10 years  
2 < 9 years  
2022-2024

<sup>1</sup> Inhalation rate taken as the 8-hour 95th percentile breathing rates, Moderate Activity (OEHHA, 2015).

<sup>2</sup> Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

Dose Exposure Factors:

exposure frequency (days/year)	250
8-hour inhalation rate (L/kg-day) <sup>1</sup>	640
inhalation absorption factor	1
conversion factor (mg/ $\mu\text{g}$ ; $\text{m}^3/\text{L}$ )	1.0E-06

<sup>3</sup> Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.

Risk Calculation Factors:

age sensitivity factor	3
averaging time (years)	70
per million	1.0E+06

**Table C6**  
**Health Risk Calculations**  
**De Anza Boulevard KinderCare**

Source (a)	MER Conc. ( $\mu\text{g}/\text{m}^3$ ) (b)	Weight Fraction (c)	Contaminant (d)	URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup> (e)	CPF (mg/kg/day) <sup>-1</sup> (f)	Dose (by age bin)	Exposure Duration <sup>2</sup> (yr) (h)	Cancer Risk	Chronic Hazards <sup>3</sup>		
						2 < 16 years		2 < 16 years	REL ( $\mu\text{g}/\text{m}^3$ ) (j)	RESP (k)	
						(mg/kg-day) (g)		per million (i)			
<b>De Anza Boulevard KinderCare Receptors</b>											
2022	On & Off-Site Emissions	6.52E-04	1.0E+00	DPM	3.0E-04	1.1E+00	5.36E-07	0.28	0.02	5.0E+00	1.30E-04
2023		2.12E-03					1.74E-06	1.0	0.26		4.23E-04
2024		2.31E-03					1.90E-06	0.17	0.05		4.62E-04
								<b>Total</b>	<b>0.3</b>		<b>0.001</b>

De Anza Boulevard KinderCare Ages  
OEHHA age bin  
exposure year(s)

6 wk to 6 years  
0 < 2 years  
2022-2024

<sup>1</sup> Inhalation rate taken as the 8-hour 95th percentile breathing rates, Moderate Activity (OEHHA, 2015).

<sup>2</sup> Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

Dose Exposure Factors:

exposure frequency (days/year)	250
8-hour inhalation rate (L/kg-day) <sup>1</sup>	1200
inhalation absorption factor	1
conversion factor (mg/ $\mu\text{g}$ ; $\text{m}^3/\text{L}$ )	1.0E-06

<sup>3</sup> Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.

Risk Calculation Factors:

age sensitivity factor	10
averaging time (years)	70
per million	1.0E+06

**Table C7**  
**Health Risk Calculations**  
**Bright Horizons at Silicon Valley**

Source (a)	MER Conc. ( $\mu\text{g}/\text{m}^3$ ) (b)	Weight Fraction (c)	Contaminant (d)	URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup> (e)	CPF (mg/kg/day) <sup>-1</sup> (f)	Dose (by age bin)	Exposure Duration <sup>2</sup> (yr) (h)	Cancer Risk	Chronic Hazards <sup>3</sup>		
						2 < 16 years		2 < 16 years	REL ( $\mu\text{g}/\text{m}^3$ ) (j)	RESP (k)	
						(mg/kg-day) (g)		per million (i)			
<b>Bright Horizons at Silicon Valley Receptors</b>											
2022	On & Off-Site Emissions	1.31E-04	1.0E+00	DPM	3.0E-04	1.1E+00	1.07E-07	0.28	0.00	5.0E+00	2.62E-05
2023		2.12E-03					1.74E-06	1.0	0.26		4.23E-04
2024		2.31E-03					1.90E-06	0.17	0.05		4.62E-04
								<b>Total</b>	<b>0.3</b>		<b>0.001</b>

Bright Horizons Ages  
OEHHA age bin  
exposure year(s)

6 wk to 6 years  
0 < 2 years  
2022-2024

<sup>1</sup> Inhalation rate taken as the 8-hour 95th percentile breathing rates, Moderate Activity (OEHHA, 2015).

<sup>2</sup> Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

Dose Exposure Factors:  
exposure frequency (days/year)  
8-hour inhalation rate (L/kg-day)<sup>1</sup>  
inhalation absorption factor  
conversion factor (mg/ $\mu\text{g}$ ;  $\text{m}^3/\text{L}$ )

250  
1200  
1  
1.0E-06

<sup>3</sup> Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.

Risk Calculation Factors:  
age sensitivity factor  
averaging time (years)  
per million

10  
70  
1.0E+06

Table C8 - Cumulative Health Risk Summary

## Health Risk Summary: Cumulative Analysis

Source No.	Source, Facility ID	Cancer Risk (per million)	Chronic HI	Acute HI	PM2.5 ( $\mu\text{g}/\text{m}^3$ )	Comments
	Construction HRA	6.3	0.019	n/a	0.04	at MEIR
1	Vikhar Valero, ID 111252	2.2	0.010	0.010	0.0	
2	Saratoga Shell, ID 112257	0.8	0.004	0.004	0.0	
3	Ho Gas (Diamond) Station, ID 112604	0.6	0.002	0.002	0.0	
4	Cupertino Sanitary District, ID 200777	2.7	<0.001	<0.001	0.003	
5	De Anza Boulevard	21.3	0.030	0.030	0.32	
6	Prospect Road	10.3	0.030	0.030	0.15	
Cumulative Total		44.1	0.09	0.08	0.51	All sources
BAAQMD Significance Threshold		100	10.0	10.0	0.80	
Exceeds Threshold?		<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	

Note: The screening cancer risk values for stationary sources and surface streets within 1,000 ft of the maximum exposed individual resident (MEIR) are for 70-year residential exposure scenario.

### Sources

1. BAAQMD Permitted Stationary Sources Risk and Hazards Webtool (2018), with distance multipliers from BAAQMD's Health Risk Calculator, Beta 4, revised 4/3/2020 at <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools>.
2. BAAQMD Roadway Screening Calculator (2015). On April 27, 2021, BAAQMD staff communicated the 2015 roadway screening calculator may continue to be used for roadways 10,000 average daily trips and higher with incorporation of a 1.3744 breathing-rate adjustment factor, per the 2015 OEHHA HRA Guidance.

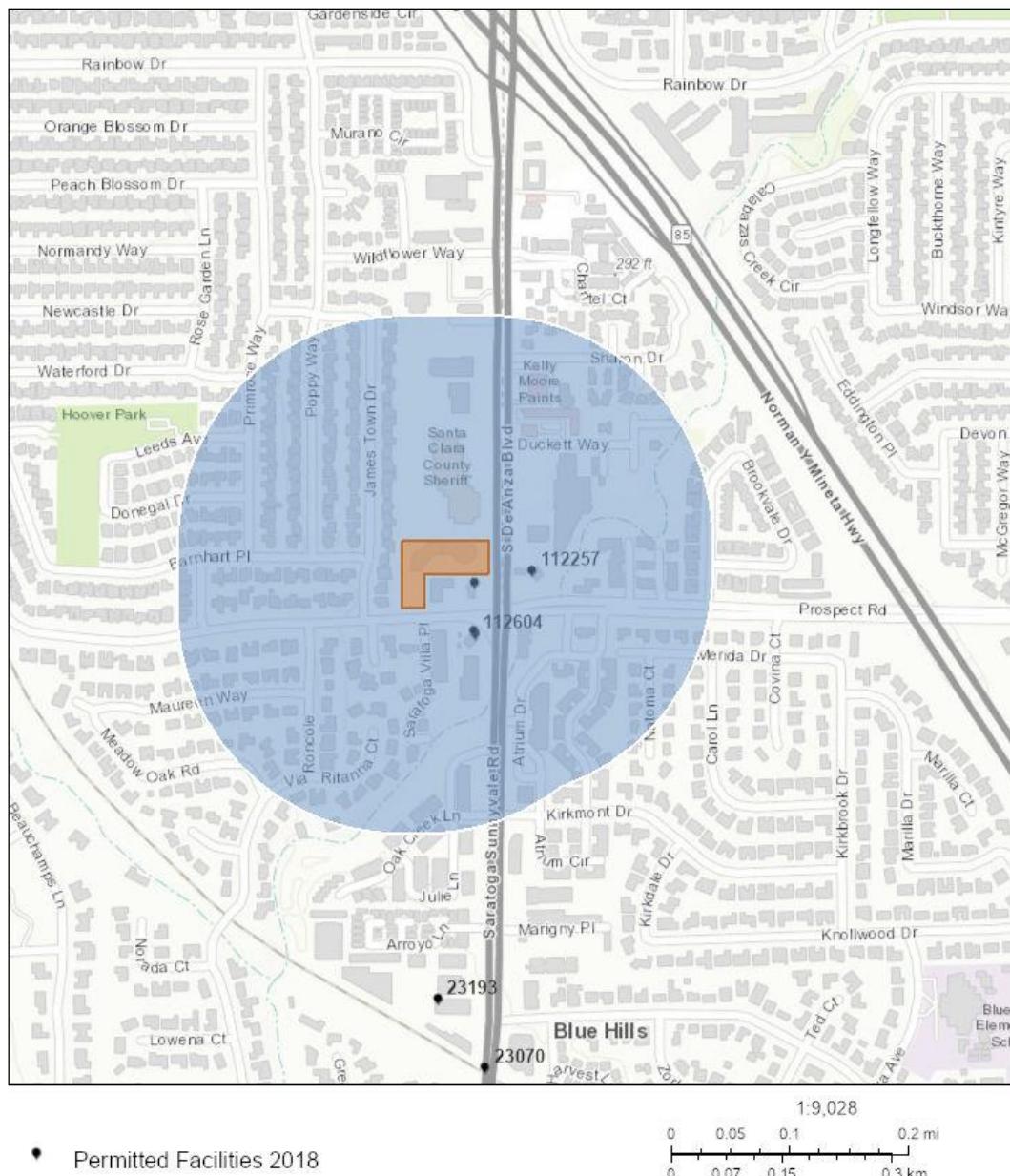


# Stationary Source Risk & Hazards Screening Report

## Area of Interest (AOI) Information

Area : 4,488,100.79 ft<sup>2</sup>

Apr 22 2022 8:33:32 Pacific Daylight Time



Sources: Esri, HERE, Garmin, Intermap, Increment P Corp., GEBCO, USGS, FAO, NPS, NRCan, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

## Summary

Name	Count	Area(ft <sup>2</sup> )	Length(ft)
Permitted Facilities 2018	4	N/A	N/A

### Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	111252	Vikhar Valero	1699 S DE ANZA BLVD	CUPERTINO	CA
2	112257	Saratoga Shell	1698 S de Anza Blvd	San Jose	CA
3	112604	Ho Gas Station	12015 Saratoga Sunnyvale Rd	Saratoga	CA
4	200777	Cupertino Sanitary District	SE Corner of Prospect Rd & Saratoga-Sunnyvale Rd	Saratoga	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	95014	Santa Clara	17.610	0.080	0.000	Gas Dispensing Facility	1
2	95129	Santa Clara	18.060	0.080	0.000	Gas Dispensing Facility	1
3	95070	Santa Clara	5.130	0.020	0.000	Gas Dispensing Facility	1
4	95070	Santa Clara	9.550	0.000	0.010	Generators	1

Note: The estimated risk and hazard impacts from these sources would be expected to be substantially lower when site specific Health Risk Screening Assessments are conducted.

The screening level map is not recommended for evaluating sensitive land uses such as schools, senior centers, day cares, and health facilities.

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# Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

## INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

- County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.
- Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.
- Side of the Roadway: Identify on which side of the roadway the project is located.
- Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.
- Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at:  
<http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>.

Notes and References listed below the Search Boxes

Search Parameters		Results
County	Santa Clara	
Roadway Direction	North-South	
Side of the Roadway	West	
Distance from Roadway	25	feet
Annual Average Daily Traffic (ADT)	29,400	
<b>Santa Clara County</b>		
NORTH-SOUTH DIRECTIONAL ROADWAY		
PM2.5 annual average		
0.318 ( $\mu\text{g}/\text{m}^3$ )		
Cancer Risk		
15.50 (per million)		
Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997		

## Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

# Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

## INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

- County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.
- Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.
- Side of the Roadway: Identify on which side of the roadway the project is located.
- Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.
- Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at:  
<http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>.

Notes and References listed below the Search Boxes

Search Parameters		Results
County	Santa Clara	
Roadway Direction	East-West	
Side of the Roadway	North	
Distance from Roadway	25	feet
Annual Average Daily Traffic (ADT)	13,620	
<b>Santa Clara County</b>		
EAST-WEST DIRECTIONAL ROADWAY		
PM2.5 annual average		
0.151 ( $\mu\text{g}/\text{m}^3$ )		
Cancer Risk		
7.47 (per million)		
Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997		

## Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

## Cumulative Risks at MEIR

**Gasoline Dispensing Facility (GDF) Distance Multiplier Tool:** This distance multiplier tool refines the screening values for cancer risk and chronic hazard index found in the District's Stationary Source Screening Analysis Tool for GDF's, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

### Gas Station

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Risk or Hazard	Adjusted Risk or Hazard
0	0.0	1.000		0.0000
5	16.4	1.000		0.0000
10	32.8	1.000		0.0000
15	49.2	1.000		0.0000
20	65.6	1.000		0.0000
25	82.0	0.728		0.0000
30	98.4	0.559		0.0000
35	114.8	0.445		0.0000
40	131.2	0.365		0.0000
45	147.6	0.305		0.0000
50	164.0	0.260		0.0000
55	180.4	0.225		0.0000
60	196.9	0.197		0.0000
65	213.3	0.174		0.0000
70	229.7	0.155		0.0000
75	246.1	0.139		0.0000
80	262.5	0.126	17.61	2.2116
85	278.9	0.114	5.13	0.5858
90	295.3	0.104		0.0000
95	311.7	0.096		0.0000
100	328.1	0.088		0.0000
105	344.5	0.082		0.0000
110	360.9	0.076		0.0000
115	377.3	0.071		0.0000
120	393.7	0.066		0.0000
125	410.1	0.062		0.0000
130	426.5	0.058		0.0000
135	442.9	0.055		0.0000
140	459.3	0.052		0.0000
145	475.7	0.049		0.0000
150	492.1	0.046		0.0000
155	508.5	0.044	18.06	0.7903
160	524.9	0.042		0.0000
165	541.3	0.040		0.0000
170	557.7	0.038		0.0000
175	574.1	0.036		0.0000
180	590.6	0.034		0.0000

## Cumulative Risks at MEIR

**Diesel Internal Combustion (IC) Engine Distance Multiplier Tool:** This distance multiplier tool refines the screening values for cancer risk and PM<sub>2.5</sub> 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.

### Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Risk or Hazard	Adjusted Risk or Hazard	Enter PM <sub>2.5</sub> Concentration	Adjusted PM <sub>2.5</sub> Concentration
0	0.0	1.000		0		0
5	16.4	1.000		0		0
10	32.8	1.000		0		0
15	49.2	1.000		0		0
20	65.6	1.000		0		0
25	82.0	0.85		0		0
30	98.4	0.73		0		0
35	114.8	0.64		0		0
40	131.2	0.58		0		0
50	164.0	0.5		0		0
60	196.9	0.41		0		0
70	229.7	0.31		0		0
80	262.5	0.28	9.55	2.674	0.01	0.0028
90	295.3	0.25		0		0
100	328.1	0.22		0		0
110	360.9	0.18		0		0
120	393.7	0.16		0		0
130	426.5	0.15		0		0
140	459.3	0.14		0		0
150	492.1	0.12		0		0
160	524.9	0.1		0		0
180	590.6	0.09		0		0
200	656.2	0.08		0		0
220	721.8	0.07		0		0
240	787.4	0.06		0		0
260	853.0	0.05		0		0
280	918.6	0.04		0		0

