

A P P E N D I X D

H E A L T H R I S K A S S E S S M E N T



1. Health Risk Assessment

1.1 CONSTRUCTION HEALTH RISK ASSESSMENT

Soltage, LLC (the project applicant) proposes to construct, install, operate, and maintain a solar photovoltaic (PV) facility located at West Grant Line Road and Great Valley Parkway in eastern unincorporated Alameda County. The approximately 23.07-acre proposed project site is currently undeveloped and is bounded by Grant Line Road to the south and vacant lots to the north, east, and west. 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 at the beginning of July 2022 and be completed by August 2022 (approximately 47 workdays). The nearest sensitive receptors to the project site include the single-family residences to the southeast. Additional sensitive receptors within 1,000 feet of the site are single family residences to the east beyond Great Valley Parkway and preschool children at Sunshine Shwetha Preschool and Daycare, 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 200 meters (656 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., the nearby residences and children at the preschool) 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_{2.5}).

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, and approximately 260 construction days per year. 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 and approximately 260 construction days per year.
- The calculated risk for children age 0 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).

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_{2.5} concentration of greater than 0.3 µg/m³

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_{2.5} 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.

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 PM₁₀ construction emissions presented in pounds (lbs) per day. The PM_{2.5} emissions were taken from the CalEEMod output for exhaust PM_{2.5} also presented in lbs per day.

The project was assumed to take place over 2 months (47 workdays) from July 2022 to August 2022. The average daily emission rates from construction equipment used during the proposed project were determined by dividing the annual average emissions for each construction year by the number of construction days per year for each calendar year of construction (i.e., 2022). The off-site hauling emission rates were adjusted to evaluate localized emissions from the 0.39-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 (Livermore Municipal 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; 6.1 m for 2nd floor receptors) for construction emissions generated between the hours of 7:00 AM and 4:00 PM with a 1-hour lunch break. In addition, a scalar factor was applied to the risk calculations to account for the number of days receptors are exposed to construction emissions per year.

A unit emission rate of 1 gram per second was used for all modeling runs. 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 receptors (MER). The air dispersion modeling predicted the off-site MER is a single-family residence southeast of the site. The MER location is the receptor location associated with the maximum predicted AERMOD concentrations from the on-site emission source. The calculated on-site emission rates are approximately 4 orders of magnitude higher than the calculated off-site emission rates (see Appendix A). Therefore, the maximum concentrations associated with the on-site emission sources produce the highest overall ground-level MER concentrations and, consequently, highest calculated health risks.

The air dispersion model output for the emission sources is presented in Appendix B. The model output DPM and PM_{2.5} concentrations from the construction emission sources are provided in Appendix C.

1.5 RISK CHARACTERIZATION

1.5.1 Carcinogenic Chemical Risk

A threshold of ten in a million (10×10^{-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 ($\text{mg}/\text{kg}/\text{day}$)⁻¹ to derive the cancer risk estimate. Therefore, to accommodate the unique exposures associated with the sensitive receptors, the following dose algorithm was used.

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

Where:

- Dose_{AIR} = dose by inhalation (mg/kg-day), per age group
- C_{air} = 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 (L/kg-day)

- A = inhalation absorption factor (default = 1)
- CF = conversion factor (1x10⁻⁶, µg to mg, L to m³)

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). The 95th 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	2	10	0.85

For construction analysis, the exposure duration spans the length of construction (e.g., 47 workdays, approximately 2 months). 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. Additionally, per OEHHA guidance a minimum exposure duration of 6 months (0.5-year) was used for the cancer risk calculations.

To represent the unique characteristics of high school student and preschool populations, the assessment employed the USEPA's guidance to develop viable dose estimates based on reasonable maximum exposure, defined as the "highest exposure that is reasonably expected to occur" for a given receptor population. Lifetime risk values for the population at Sunshine Shwetha Preschool and Daycare were adjusted to account for an exposure of 260 days per year (age 0 to 2 years). In addition, the calculated risk for children is multiplied by an ASF weighting factor of 10 (for children ages 0 to 2) to account for early life sensitivity to pollutant exposures (OEHHA, 2015). 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_{AIR} = dose by inhalation (mg/kg-day), per age group
- CPF = cancer potency factor, chemical-specific (mg/kg-day)⁻¹
- 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 1×10^6 (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 $PM_{2.5}$ 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 $0.3 \mu\text{g}/\text{m}^3$ for the annual average $PM_{2.5}$ 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 - UNMITIGATED

Receptor	Cancer Risk (per million)	Chronic Hazards	PM _{2.5} (µg/m ³)
Maximum Exposed Receptor – Off-site Resident	0.1	0.0004	0.002
Sunshine Shwetha Preschool and Daycare	0.023	0.0001	0.0003
BAAQMD Threshold	10	1.0	0.30
Exceeds Threshold?	No	No	No

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.

Cancer risk for the residential MER from project-related construction emissions was calculated to be 0.1 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 2-month construction period and calculated over a minimum 6-month exposure duration; 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 construction days per year and exposed to all of the daily construction emissions. The cancer risk for the maximum exposed preschool receptor was calculated to be 0.023 in a million which also would not exceed the significance threshold.

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 less than significant. For the residential MER, the maximum annual PM_{2.5} concentration of 0.002 µg/m³ would not exceed the BAAQMD significance threshold of 0.3 micrograms per cubic meter (µg/m³). Lastly, the preschool receptors maximum annual PM_{2.5} concentration of 0.0003 µg/m³ each would also not exceed the BAAQMD significance threshold. Therefore, 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

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.

———. 2010. *Screening Tables for Air Toxics Evaluation During Construction*. Version 1.0. Dated May 2010.

———. 2009-2013. *Meteorological Data Set for Livermore Municipal 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.

Appendix A. Emission Rate Calculations

Average Daily Emissions and Emission Rates

Onsite Construction PM10 Exhaust Emissions ¹			
Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2022	0.08	9.79E-03	1.23E-03

Onsite Construction PM2.5 Exhaust Emissions ²		
Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
0.07	8.94E-03	1.13E-03

Offsite Construction PM10 Exhaust Emissions ¹					Offsite Construction PM2.5 Exhaust Emissions ²			
Year	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day) ³	Emission Rate (lbs/hr)	Emission Rate (g/s)	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day) ³	Emission Rate (lbs/hr)	Emission Rate (g/s)
2022	2.13E-03	4.10E-05	5.12E-06	6.45E-07	2.13E-03	4.10E-05	5.12E-06	6.45E-07

Note: Emissions evenly distributed over 48 modeled volume sources.

	Year	Workdays	Construction Duration ⁵
Hauling Length (miles)	20	miles	
Haul Length within 1,000 ft of Site (mile) ³	0.39	miles	
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks) ⁴	8	hours	
	2022	47	0.18

¹ DPM emissions taken as PM₁₀ exhaust emissions from CalEEMod average daily emissions.

² PM_{2.5} emissions taken as PM_{2.5} exhaust emissions from CalEEMod average daily emissions.

³ Emissions from CalEEMod offsite average daily emissions, which is based on proportioned haul truck trip distances, are adjusted to evaluate emissions from the 0.39-mile route within 1,000 of the project site.

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

⁵ Construction duration for 2022 determined to adjust receptor exposures to the exposure durations for each construction year (see App C - Risk Calculations).

Appendix B. Air Dispersion Model Output

*** AERMOD - VERSION 19191 *** *** SOLT-01 Construction HRA
*** AERMET - VERSION 14134 *** *** Tracy

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*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL RURAL

*** MODEL SETUP OPTIONS SUMMARY ***

**Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --

**NO GAS DEPOSITION Data Provided.

**NO PARTICLE DEPOSITION Data Provided.

**Model Uses NO DRY DEPLETION. DRYDPLT = F

**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Uses Regulatory DEFAULT Options:

1. Stack-tip Downwash.
2. Model Accounts for ELEVated Terrain Effects.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.

**Other Options Specified:

CCVR_Sub - Meteorological data includes CCVR substitutions

TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 49 Source(s); 2 Source Group(s); and 171 Receptor(s)

with: 0 POINT(s), including
 0 POINTCAP(s) and 0 POINTHOR(s)
and: 48 VOLUME source(s)
and: 1 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

****Output Options Selected:**

Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

****NOTE:** The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

****Misc. Inputs:** Base Elev. for Pot. Temp. Profile (m MSL) = 119.80 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

****Approximate Storage Requirements of Model = 3.6 MB of RAM.**

****Input Runstream File:** aermod.inp
****Output Print File:** aermod.out

****Detailed Error/Message File:** SOLT-01.err
****File for Summary of Results:** SOLT-01.sum

*** AERMOD - VERSION 19191 ***
*** AERMET - VERSION 14134 ***

*** SOLT-01 Construction HRA
*** Tracy

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*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL RURAL
*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.20833E-01	626667.0	4179686.4	60.2	4.15	6.04	3.26	NO	HRDOW
L0000002	0	0.20833E-01	626679.9	4179687.8	59.8	4.15	6.04	3.26	NO	HRDOW
L0000003	0	0.20833E-01	626692.8	4179689.2	59.4	4.15	6.04	3.26	NO	HRDOW
L0000004	0	0.20833E-01	626705.7	4179690.6	59.0	4.15	6.04	3.26	NO	HRDOW
L0000005	0	0.20833E-01	626718.6	4179692.0	58.6	4.15	6.04	3.26	NO	HRDOW
L0000006	0	0.20833E-01	626731.5	4179693.4	58.3	4.15	6.04	3.26	NO	HRDOW
L0000007	0	0.20833E-01	626744.4	4179694.8	58.0	4.15	6.04	3.26	NO	HRDOW
L0000008	0	0.20833E-01	626757.3	4179696.1	57.8	4.15	6.04	3.26	NO	HRDOW
L0000009	0	0.20833E-01	626770.2	4179697.5	57.4	4.15	6.04	3.26	NO	HRDOW
L0000010	0	0.20833E-01	626783.1	4179698.9	57.0	4.15	6.04	3.26	NO	HRDOW
L0000011	0	0.20833E-01	626796.0	4179700.3	56.6	4.15	6.04	3.26	NO	HRDOW
L0000012	0	0.20833E-01	626808.9	4179701.7	56.2	4.15	6.04	3.26	NO	HRDOW
L0000013	0	0.20833E-01	626821.8	4179703.1	55.7	4.15	6.04	3.26	NO	HRDOW
L0000014	0	0.20833E-01	626834.7	4179704.5	55.3	4.15	6.04	3.26	NO	HRDOW
L0000015	0	0.20833E-01	626847.6	4179705.9	54.8	4.15	6.04	3.26	NO	HRDOW
L0000016	0	0.20833E-01	626860.5	4179707.3	54.4	4.15	6.04	3.26	NO	HRDOW
L0000017	0	0.20833E-01	626873.4	4179708.7	54.0	4.15	6.04	3.26	NO	HRDOW
L0000018	0	0.20833E-01	626886.3	4179710.0	53.7	4.15	6.04	3.26	NO	HRDOW
L0000019	0	0.20833E-01	626899.3	4179711.4	53.3	4.15	6.04	3.26	NO	HRDOW
L0000020	0	0.20833E-01	626912.2	4179712.8	52.9	4.15	6.04	3.26	NO	HRDOW
L0000021	0	0.20833E-01	626925.1	4179714.2	52.5	4.15	6.04	3.26	NO	HRDOW
L0000022	0	0.20833E-01	626938.0	4179715.6	52.2	4.15	6.04	3.26	NO	HRDOW
L0000023	0	0.20833E-01	626950.9	4179717.0	51.9	4.15	6.04	3.26	NO	HRDOW
L0000024	0	0.20833E-01	626963.8	4179718.4	51.7	4.15	6.04	3.26	NO	HRDOW
L0000025	0	0.20833E-01	626976.7	4179719.8	51.5	4.15	6.04	3.26	NO	HRDOW
L0000026	0	0.20833E-01	626989.6	4179721.2	51.3	4.15	6.04	3.26	NO	HRDOW
L0000027	0	0.20833E-01	627002.5	4179722.6	51.0	4.15	6.04	3.26	NO	HRDOW
L0000028	0	0.20833E-01	627015.4	4179723.9	50.7	4.15	6.04	3.26	NO	HRDOW
L0000029	0	0.20833E-01	627028.3	4179725.3	50.3	4.15	6.04	3.26	NO	HRDOW
L0000030	0	0.20833E-01	627041.2	4179726.7	50.0	4.15	6.04	3.26	NO	HRDOW
L0000031	0	0.20833E-01	627054.1	4179728.1	49.7	4.15	6.04	3.26	NO	HRDOW
L0000032	0	0.20833E-01	627067.0	4179729.5	49.4	4.15	6.04	3.26	NO	HRDOW
L0000033	0	0.20833E-01	627079.9	4179730.9	49.0	4.15	6.04	3.26	NO	HRDOW
L0000034	0	0.20833E-01	627092.8	4179732.3	48.7	4.15	6.04	3.26	NO	HRDOW
L0000035	0	0.20833E-01	627105.7	4179733.7	48.3	4.15	6.04	3.26	NO	HRDOW
L0000036	0	0.20833E-01	627118.6	4179735.1	48.0	4.15	6.04	3.26	NO	HRDOW
L0000037	0	0.20833E-01	627131.5	4179736.4	47.6	4.15	6.04	3.26	NO	HRDOW
L0000038	0	0.20833E-01	627144.5	4179737.8	47.4	4.15	6.04	3.26	NO	HRDOW
L0000039	0	0.20833E-01	627157.4	4179739.2	47.1	4.15	6.04	3.26	NO	HRDOW
L0000040	0	0.20833E-01	627170.3	4179740.6	46.9	4.15	6.04	3.26	NO	HRDOW

*** AERMOD - VERSION 19191 *** *** SOLT-01 Construction HRA
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL RURAL

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000041	0	0.20833E-01	627183.2	4179742.0	46.6	4.15	6.04	3.26	NO	HRDOW
L0000042	0	0.20833E-01	627196.1	4179743.4	46.3	4.15	6.04	3.26	NO	HRDOW
L0000043	0	0.20833E-01	627209.0	4179744.8	46.0	4.15	6.04	3.26	NO	HRDOW
L0000044	0	0.20833E-01	627221.9	4179746.2	45.7	4.15	6.04	3.26	NO	HRDOW
L0000045	0	0.20833E-01	627234.8	4179747.6	45.4	4.15	6.04	3.26	NO	HRDOW
L0000046	0	0.20833E-01	627247.7	4179749.0	45.1	4.15	6.04	3.26	NO	HRDOW
L0000047	0	0.20833E-01	627260.6	4179750.3	44.8	4.15	6.04	3.26	NO	HRDOW
L0000048	0	0.20833E-01	627273.5	4179751.7	44.4	4.15	6.04	3.26	NO	HRDOW

*** AERMOD - VERSION 19191 *** *** SOLT-01 Construction HRA
 *** AERMET - VERSION 14134 *** *** Tracy

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL RURAL

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
1	0	0.10423E-04	626659.1	4179699.5	61.0	4.15	8	1.93	NO	HRDOW

*** AERMOD - VERSION 19191 *** *** SOLT-01 Construction HRA
*** AERMET - VERSION 14134 *** *** Tracy
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL RURAL

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*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs																
-----	-----																
ONSITE	1	,															
OFFSITE	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	,	L0000029	,	L0000030	,	L0000031	,	L0000032	,	
	L0000033	,	L0000034	,	L0000035	,	L0000036	,	L0000037	,	L0000038	,	L0000039	,	L0000040	,	
	L0000041	,	L0000042	,	L0000043	,	L0000044	,	L0000045	,	L0000046	,	L0000047	,	L0000048	,	

*** AERMOD - VERSION 19191 ***
*** AERMET - VERSION 14134 ***

*** SOLT-01 Construction HRA
*** Tracy

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL RURAL

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = 1 ; SOURCE TYPE = AREAPOLY :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.0000E+00	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** AERMOD - VERSION 19191 *** *** SOLT-01 Construction HRA
 *** AERMET - VERSION 14134 *** *** Tracy

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 *** PAGE 7

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL RURAL

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000001 TO L0000048 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				
DAY OF WEEK = WEEKDAY																			
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.0000E+00	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01	17	.0000E+00		
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00				
DAY OF WEEK = SATURDAY																			
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00	9	.0000E+00		
10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00
20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00										
DAY OF WEEK = SUNDAY																			
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00	9	.0000E+00		
10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00
20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00										

*** AERMOD - VERSION 19191 ***
*** AERMET - VERSION 14134 ***
*** MODELOPTs: RegDEFAULT CONC

*** SOLT-01 Construction HRA
*** Tracy
ELEV FLGPOL RURAL
*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)

*** 01/28/22
*** 12:00:44

(627156.6, 4179800.9,	46.9,	46.9,	1.5);	(627192.3, 4179797.5,	46.4,	46.4,	1.5);
(627212.3, 4179797.5,	46.1,	46.1,	1.5);	(627232.3, 4179797.5,	45.7,	45.7,	1.5);
(627252.3, 4179797.5,	45.3,	45.3,	1.5);	(627272.3, 4179797.5,	44.9,	44.9,	1.5);
(627149.7, 4179827.4,	46.9,	46.9,	1.5);	(627149.7, 4179847.4,	46.7,	46.7,	1.5);
(627196.6, 4179840.9,	46.2,	46.2,	1.5);	(627216.6, 4179840.9,	45.9,	45.9,	1.5);
(627236.6, 4179840.9,	45.4,	45.4,	1.5);	(627149.7, 4179867.4,	46.5,	46.5,	1.5);
(627271.9, 4179851.8,	44.7,	44.7,	1.5);	(627149.7, 4179887.4,	46.2,	46.2,	1.5);
(627197.0, 4179870.7,	45.8,	45.8,	1.5);	(627229.7, 4179871.8,	45.0,	45.0,	1.5);
(627271.9, 4179882.0,	44.4,	44.4,	1.5);	(627149.7, 4179907.4,	45.9,	45.9,	1.5);
(627197.0, 4179890.7,	45.5,	45.5,	1.5);	(627229.7, 4179891.8,	44.6,	44.6,	1.5);
(627271.9, 4179902.0,	44.1,	44.1,	1.5);	(627149.7, 4179927.4,	45.4,	45.4,	1.5);
(627197.0, 4179910.7,	45.1,	45.1,	1.5);	(627229.7, 4179911.8,	44.2,	44.2,	1.5);
(627271.9, 4179922.0,	43.8,	43.8,	1.5);	(627149.7, 4179947.4,	45.0,	45.0,	1.5);
(627197.0, 4179930.7,	44.7,	44.7,	1.5);	(627229.7, 4179931.8,	43.8,	43.8,	1.5);
(627271.9, 4179942.0,	43.4,	43.4,	1.5);	(627149.7, 4179967.4,	44.5,	44.5,	1.5);
(627197.0, 4179950.7,	44.3,	44.3,	1.5);	(627229.7, 4179951.8,	43.4,	43.4,	1.5);
(627271.9, 4179962.0,	43.1,	43.1,	1.5);	(627149.7, 4179987.4,	44.0,	44.0,	1.5);
(627197.0, 4179970.7,	43.8,	43.8,	1.5);	(627229.7, 4179971.8,	43.0,	43.0,	1.5);
(627271.9, 4179982.0,	42.7,	42.7,	1.5);	(627149.7, 4180007.4,	43.5,	43.5,	1.5);
(627197.0, 4179990.7,	43.3,	43.3,	1.5);	(627229.7, 4179991.8,	42.6,	42.6,	1.5);
(627271.9, 4180002.0,	42.3,	42.3,	1.5);	(627196.6, 4180020.9,	42.6,	42.6,	1.5);
(627216.6, 4180020.9,	42.3,	42.3,	1.5);	(627236.6, 4180020.9,	42.1,	42.1,	1.5);
(627271.9, 4180022.0,	41.9,	41.9,	1.5);	(627149.5, 4180071.1,	42.5,	42.5,	1.5);
(627199.2, 4180064.6,	42.3,	42.3,	1.5);	(627219.2, 4180064.6,	42.2,	42.2,	1.5);
(627239.2, 4180064.6,	42.0,	42.0,	1.5);	(627253.7, 4180064.0,	41.8,	41.8,	1.5);
(627273.7, 4180064.0,	41.6,	41.6,	1.5);	(627149.5, 4180091.1,	42.3,	42.3,	1.5);
(627149.5, 4180111.1,	42.1,	42.1,	1.5);	(627187.8, 4180096.8,	41.9,	41.9,	1.5);
(627207.8, 4180096.8,	41.9,	41.9,	1.5);	(627227.8, 4180096.8,	41.6,	41.6,	1.5);
(627247.8, 4180096.8,	41.4,	41.4,	1.5);	(627267.8, 4180096.8,	41.2,	41.2,	1.5);
(627149.2, 4180124.0,	42.0,	42.0,	1.5);	(627149.2, 4180144.0,	41.8,	41.8,	1.5);
(627188.0, 4180142.7,	41.6,	41.6,	1.5);	(627208.0, 4180142.7,	41.5,	41.5,	1.5);
(627228.0, 4180142.7,	41.3,	41.3,	1.5);	(627248.0, 4180142.7,	41.1,	41.1,	1.5);
(627268.0, 4180142.7,	40.8,	40.8,	1.5);	(627149.2, 4180164.0,	41.6,	41.6,	1.5);
(627149.2, 4180184.0,	41.4,	41.4,	1.5);	(627187.8, 4180176.8,	41.1,	41.1,	1.5);
(627207.8, 4180176.8,	40.9,	40.9,	1.5);	(627227.8, 4180176.8,	40.7,	40.7,	1.5);
(627247.8, 4180176.8,	40.4,	40.4,	1.5);	(627267.8, 4180176.8,	40.2,	40.2,	1.5);
(627149.2, 4180204.0,	41.1,	41.1,	1.5);	(627188.2, 4180222.5,	40.7,	40.7,	1.5);
(627208.2, 4180222.5,	40.6,	40.6,	1.5);	(627228.2, 4180222.5,	40.4,	40.4,	1.5);
(627248.2, 4180222.5,	40.1,	40.1,	1.5);	(627268.2, 4180222.5,	39.7,	39.7,	1.5);
(627003.2, 4179681.4,	49.9,	49.9,	1.5);	(627059.2, 4179681.4,	48.8,	48.8,	1.5);
(627119.1, 4179672.0,	47.5,	47.5,	1.5);	(627113.4, 4179642.4,	47.9,	47.9,	1.5);
(627112.1, 4179564.9,	50.3,	50.3,	1.5);	(627111.5, 4179590.8,	49.4,	49.4,	1.5);
(627115.9, 4179501.4,	48.7,	48.7,	1.5);	(627120.9, 4179533.5,	49.4,	49.4,	1.5);
(627160.0, 4179673.2,	46.7,	46.7,	1.5);	(627185.2, 4179694.0,	46.1,	46.1,	1.5);
(627173.2, 4179619.1,	47.4,	47.4,	1.5);	(627165.6, 4179571.9,	48.5,	48.5,	1.5);

*** AERMOD - VERSION 19191 ***
*** AERMET - VERSION 14134 ***

*** SOLT-01 Construction HRA
*** Tracy

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL RURAL

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(627171.3, 4179532.8, 47.8, 47.8, 1.5);	(627173.2, 4179486.3, 47.6, 47.6, 1.5);
(627249.9, 4180223.0, 40.0, 40.0, 1.5);	(627156.6, 4179800.9, 46.9, 46.9, 6.1);
(627192.3, 4179797.5, 46.4, 46.4, 6.1);	(627212.3, 4179797.5, 46.1, 46.1, 6.1);
(627232.3, 4179797.5, 45.7, 45.7, 6.1);	(627252.3, 4179797.5, 45.3, 45.3, 6.1);
(627272.3, 4179797.5, 44.9, 44.9, 6.1);	(627149.7, 4179827.4, 46.9, 46.9, 6.1);
(627149.7, 4179847.4, 46.7, 46.7, 6.1);	(627196.6, 4179840.9, 46.2, 46.2, 6.1);
(627216.6, 4179840.9, 45.9, 45.9, 6.1);	(627236.6, 4179840.9, 45.4, 45.4, 6.1);
(627149.7, 4179867.4, 46.5, 46.5, 6.1);	(627271.9, 4179851.8, 44.7, 44.7, 6.1);
(627149.7, 4179887.4, 46.2, 46.2, 6.1);	(627197.0, 4179870.7, 45.8, 45.8, 6.1);
(627229.7, 4179871.8, 45.0, 45.0, 6.1);	(627271.9, 4179882.0, 44.4, 44.4, 6.1);
(627149.7, 4179907.4, 45.9, 45.9, 6.1);	(627197.0, 4179890.7, 45.5, 45.5, 6.1);
(627229.7, 4179891.8, 44.6, 44.6, 6.1);	(627271.9, 4179902.0, 44.1, 44.1, 6.1);
(627149.7, 4179927.4, 45.4, 45.4, 6.1);	(627197.0, 4179910.7, 45.1, 45.1, 6.1);
(627229.7, 4179911.8, 44.2, 44.2, 6.1);	(627271.9, 4179922.0, 43.8, 43.8, 6.1);
(627149.7, 4179947.4, 45.0, 45.0, 6.1);	(627197.0, 4179930.7, 44.7, 44.7, 6.1);
(627229.7, 4179931.8, 43.8, 43.8, 6.1);	(627271.9, 4179942.0, 43.4, 43.4, 6.1);
(627149.7, 4179967.4, 44.5, 44.5, 6.1);	(627197.0, 4179950.7, 44.3, 44.3, 6.1);
(627229.7, 4179951.8, 43.4, 43.4, 6.1);	(627271.9, 4179962.0, 43.1, 43.1, 6.1);
(627149.7, 4179987.4, 44.0, 44.0, 6.1);	(627197.0, 4179970.7, 43.8, 43.8, 6.1);
(627229.7, 4179971.8, 43.0, 43.0, 6.1);	(627271.9, 4179982.0, 42.7, 42.7, 6.1);
(627149.7, 4180007.4, 43.5, 43.5, 6.1);	(627197.0, 4179990.7, 43.3, 43.3, 6.1);
(627229.7, 4179991.8, 42.6, 42.6, 6.1);	(627271.9, 4180002.0, 42.3, 42.3, 6.1);
(627196.6, 4180020.9, 42.6, 42.6, 6.1);	(627216.6, 4180020.9, 42.3, 42.3, 6.1);
(627236.6, 4180020.9, 42.1, 42.1, 6.1);	(627271.9, 4180022.0, 41.9, 41.9, 6.1);
(627149.5, 4180071.1, 42.5, 42.5, 6.1);	(627199.2, 4180064.6, 42.3, 42.3, 6.1);
(627219.2, 4180064.6, 42.2, 42.2, 6.1);	(627239.2, 4180064.6, 42.0, 42.0, 6.1);
(627253.7, 4180064.0, 41.8, 41.8, 6.1);	(627273.7, 4180064.0, 41.6, 41.6, 6.1);
(627149.5, 4180091.1, 42.3, 42.3, 6.1);	(627149.5, 4180111.1, 42.1, 42.1, 6.1);
(627187.8, 4180096.8, 41.9, 41.9, 6.1);	(627207.8, 4180096.8, 41.9, 41.9, 6.1);
(627227.8, 4180096.8, 41.6, 41.6, 6.1);	(627247.8, 4180096.8, 41.4, 41.4, 6.1);
(627267.8, 4180096.8, 41.2, 41.2, 6.1);	(627149.2, 4180124.0, 42.0, 42.0, 6.1);
(627149.2, 4180144.0, 41.8, 41.8, 6.1);	(627188.0, 4180142.7, 41.6, 41.6, 6.1);
(627208.0, 4180142.7, 41.5, 41.5, 6.1);	(627228.0, 4180142.7, 41.3, 41.3, 6.1);
(627248.0, 4180142.7, 41.1, 41.1, 6.1);	(627268.0, 4180142.7, 40.8, 40.8, 6.1);
(627149.2, 4180164.0, 41.6, 41.6, 6.1);	(627149.2, 4180184.0, 41.4, 41.4, 6.1);
(627187.8, 4180176.8, 41.1, 41.1, 6.1);	(627207.8, 4180176.8, 40.9, 40.9, 6.1);
(627227.8, 4180176.8, 40.7, 40.7, 6.1);	(627247.8, 4180176.8, 40.4, 40.4, 6.1);
(627267.8, 4180176.8, 40.2, 40.2, 6.1);	(627149.2, 4180204.0, 41.1, 41.1, 6.1);
(627188.2, 4180222.5, 40.7, 40.7, 6.1);	(627208.2, 4180222.5, 40.6, 40.6, 6.1);
(627228.2, 4180222.5, 40.4, 40.4, 6.1);	(627248.2, 4180222.5, 40.1, 40.1, 6.1);
(627268.2, 4180222.5, 39.7, 39.7, 6.1);	

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*** AERMOD - VERSION 19191 *** *** SOLT-01 Construction HRA
*** AERMET - VERSION 14134 *** *** Tracy
*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL RURAL
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*** 01/28/22
*** 12:00:44
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*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.
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*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)
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1.54, 3.09, 5.14, 8.23, 10.80,
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*** AERMOD - VERSION 19191 ***
*** AERMET - VERSION 14134 ***

*** SOLT-01 Construction HRA
*** Tracy

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*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL RURAL

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: \\Pw102\mend_1\SOLT-01.0\03_ProductFiles\Tech Team\AQGHG\HRA\B - AirDispersionMo Met Version: 14134
Profile file: \\Pw102\mend_1\SOLT-01.0\03_ProductFiles\Tech Team\AQGHG\HRA\B - AirDispersionMo
Surface format: FREE
Profile format: FREE
Surface station no.: 23285 Upper air station no.: 23230
Name: UNKNOWN Name: OAKLAND/WSO_AP
Year: 2009 Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT
09	01	01	1	01	-12.6	0.221	-9.000	-9.000	-999.	250.	77.5	0.11	0.90	1.00	2.86	51.	10.0	279.2	2.0			
09	01	01	1	02	-23.5	0.413	-9.000	-9.000	-999.	637.	269.8	0.11	0.90	1.00	4.86	48.	10.0	279.2	2.0			
09	01	01	1	03	-11.1	0.195	-9.000	-9.000	-999.	254.	59.8	0.07	0.90	1.00	2.86	94.	10.0	278.8	2.0			
09	01	01	1	04	-9.5	0.166	-9.000	-9.000	-999.	164.	43.7	0.11	0.90	1.00	2.36	53.	10.0	278.1	2.0			
09	01	01	1	05	-11.1	0.195	-9.000	-9.000	-999.	206.	59.6	0.07	0.90	1.00	2.86	63.	10.0	278.1	2.0			
09	01	01	1	06	-8.2	0.143	-9.000	-9.000	-999.	131.	32.3	0.07	0.90	1.00	2.36	72.	10.0	278.1	2.0			
09	01	01	1	07	-8.2	0.143	-9.000	-9.000	-999.	130.	32.3	0.07	0.90	1.00	2.36	75.	10.0	278.1	2.0			
09	01	01	1	08	-4.1	0.078	-9.000	-9.000	-999.	53.	10.3	0.11	0.90	0.75	1.76	13.	10.0	277.5	2.0			
09	01	01	1	09	-6.3	0.246	-9.000	-9.000	-999.	292.	211.6	0.12	0.90	0.40	2.86	347.	10.0	278.1	2.0			
09	01	01	1	10	6.6	0.303	0.261	0.016	96.	401.	-378.3	0.11	0.90	0.27	3.36	51.	10.0	278.8	2.0			
09	01	01	1	11	15.4	0.317	0.422	0.017	176.	429.	-186.8	0.07	0.90	0.23	3.86	94.	10.0	279.9	2.0			
09	01	01	1	12	47.5	0.448	0.742	0.017	309.	720.	-170.5	0.11	0.90	0.22	4.86	56.	10.0	280.9	2.0			
09	01	01	1	13	49.0	0.405	0.820	0.014	403.	621.	-122.0	0.07	0.90	0.21	4.86	63.	10.0	281.4	2.0			
09	01	01	1	14	42.7	0.405	0.809	0.014	444.	619.	-139.5	0.11	0.90	0.22	4.36	59.	10.0	282.0	2.0			
09	01	01	1	15	60.8	0.372	0.922	0.014	463.	545.	-75.6	0.07	0.90	0.25	4.36	72.	10.0	281.4	2.0			
09	01	01	1	16	14.1	0.309	0.569	0.016	467.	414.	-187.5	0.11	0.90	0.34	3.36	54.	10.0	282.0	2.0			
09	01	01	1	17	-30.4	0.311	-9.000	-9.000	-999.	417.	89.1	0.07	0.90	0.58	4.36	61.	10.0	280.4	2.0			
09	01	01	1	18	-27.0	0.239	-9.000	-9.000	-999.	282.	45.2	0.11	0.90	1.00	3.36	47.	10.0	279.9	2.0			
09	01	01	1	19	-14.9	0.131	-9.000	-9.000	-999.	120.	13.7	0.07	0.90	1.00	2.86	64.	10.0	279.2	2.0			
09	01	01	1	20	-5.8	0.078	-9.000	-9.000	-999.	53.	7.3	0.11	0.90	1.00	1.76	47.	10.0	278.8	2.0			
09	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	0.90	1.00	0.00	0.	10.0	277.5	2.0			
09	01	01	1	22	-4.9	0.070	-9.000	-9.000	-999.	44.	6.2	0.07	0.90	1.00	1.76	82.	10.0	276.4	2.0			
09	01	01	1	23	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	0.90	1.00	0.00	0.	10.0	277.0	2.0			
09	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	0.90	1.00	0.00	0.	10.0	277.0	2.0			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB	TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	51.	2.86	279.3	99.0	-99.00	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** AERMOD - VERSION 19191 *** *** SOLT-01 Construction HRA
 *** AERMET - VERSION 14134 *** *** Tracy

*** 01/28/22
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*** MODELOPTs: RegDFault CONC ELEV FLGPOL RURAL
 *** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ONSITE ***
 INCLUDING SOURCE(S): 1
 *** 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	
627156.64	4179800.87	1.21252	627192.30	4179797.46	1.00285	
627212.30	4179797.46	0.90790	627232.30	4179797.46	0.82509	
627252.30	4179797.46	0.75266	627272.30	4179797.46	0.68898	
627149.72	4179827.43	1.25896	627149.72	4179847.43	1.23997	
627196.64	4179840.87	0.96150	627216.64	4179840.87	0.86771	
627236.64	4179840.87	0.78637	627149.72	4179867.43	1.20731	
627271.90	4179851.76	0.65933	627149.72	4179887.43	1.16212	
627197.00	4179870.67	0.92078	627229.72	4179871.76	0.77759	
627271.90	4179881.96	0.62882	627149.72	4179907.43	1.10700	
627197.00	4179890.67	0.88616	627229.72	4179891.76	0.74878	
627271.90	4179901.96	0.60533	627149.72	4179927.43	1.04450	
627197.00	4179910.67	0.84674	627229.72	4179911.76	0.71707	
627271.90	4179921.96	0.58030	627149.72	4179947.43	0.97741	
627197.00	4179930.67	0.80389	627229.72	4179931.76	0.68340	
627271.90	4179941.96	0.55430	627149.72	4179967.43	0.90811	
627197.00	4179950.67	0.75880	627229.72	4179951.76	0.64831	
627271.90	4179961.96	0.52767	627149.72	4179987.43	0.83854	
627197.00	4179970.67	0.71241	627229.72	4179971.76	0.61236	
627271.90	4179981.96	0.50069	627149.72	4180007.43	0.77104	
627197.00	4179990.67	0.66539	627229.72	4179991.76	0.57611	
627271.90	4180001.96	0.47369	627196.64	4180020.87	0.59754	
627216.64	4180020.87	0.55181	627236.64	4180020.87	0.51075	
627271.90	4180021.96	0.44700	627149.51	4180071.09	0.58662	
627199.25	4180064.59	0.50438	627219.25	4180064.59	0.47039	
627239.25	4180064.59	0.43931	627253.68	4180063.97	0.41935	
627273.68	4180063.97	0.39254	627149.51	4180091.09	0.53885	
627149.51	4180111.09	0.49511	627187.79	4180096.84	0.46483	
627207.79	4180096.84	0.43629	627227.79	4180096.84	0.40968	
627247.79	4180096.84	0.38505	627267.79	4180096.84	0.36226	
627149.20	4180123.97	0.46929	627149.20	4180143.97	0.43138	
627187.95	4180142.66	0.39135	627207.95	4180142.66	0.37095	
627227.95	4180142.66	0.35145	627247.95	4180142.66	0.33303	
627267.95	4180142.66	0.31567	627149.20	4180163.97	0.39681	
627149.20	4180183.97	0.36540	627187.79	4180176.84	0.34412	
627207.79	4180176.84	0.32833	627227.79	4180176.84	0.31308	
627247.79	4180176.84	0.29850	627267.79	4180176.84	0.28461	
627149.20	4180203.97	0.33692	627188.23	4180222.46	0.29040	
627208.23	4180222.46	0.27913	627228.23	4180222.46	0.26809	
627248.23	4180222.46	0.25741	627268.23	4180222.46	0.24710	
627003.22	4179681.41	1.56105	Residential MER	627059.25	4179681.41	1.29951

*** AERMOD - VERSION 19191 ***
*** AERMET - VERSION 14134 ***

*** SOLT-01 Construction HRA
*** Tracy

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*** MODELOPTs: RegDFault CONC ELEV FLGPOL RURAL
*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1
*** 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
627119.05	4179671.97	0.98823	627113.39	4179642.38	0.82987
627112.13	4179564.95	0.45815	627111.50	4179590.76	0.56449
627115.90	4179501.37	0.26912	627120.94	4179533.47	0.35355
627159.97	4179673.23	0.86688	627185.15	4179694.00	0.86010
627173.19	4179619.09	0.63192	627165.64	4179571.88	0.47307
627171.30	4179532.85	0.35755	627173.19	4179486.26	0.25400
627249.86	4180223.03	0.25608	627156.64	4179800.87	1.22727
627192.30	4179797.46	1.01273	627212.30	4179797.46	0.91602
627232.30	4179797.46	0.83192	627252.30	4179797.46	0.75846
627272.30	4179797.46	0.69397	627149.72	4179827.43	1.27577
627149.72	4179847.43	1.25715	627196.64	4179840.87	0.97150
627216.64	4179840.87	0.87596	627236.64	4179840.87	0.79337
627149.72	4179867.43	1.22463	627271.90	4179851.76	0.66463
627149.72	4179887.43	1.17949	627197.00	4179870.67	0.93101
627229.72	4179871.76	0.78535	627271.90	4179881.96	0.63414
627149.72	4179907.43	1.12416	627197.00	4179890.67	0.89645
627229.72	4179891.76	0.75664	627271.90	4179901.96	0.61061
627149.72	4179927.43	1.06115	627197.00	4179910.67	0.85691
627229.72	4179911.76	0.72484	627271.90	4179921.96	0.58545
627149.72	4179947.43	0.99317	627197.00	4179930.67	0.81373
627229.72	4179931.76	0.69088	627271.90	4179941.96	0.55921
627149.72	4179967.43	0.92266	627197.00	4179950.67	0.76812
627229.72	4179951.76	0.65538	627271.90	4179961.96	0.53229
627149.72	4179987.43	0.85173	627197.00	4179970.67	0.72109
627229.72	4179971.76	0.61894	627271.90	4179981.96	0.50498
627149.72	4180007.43	0.78279	627197.00	4179990.67	0.67345
627229.72	4179991.76	0.58218	627271.90	4180001.96	0.47765
627196.64	4180020.87	0.60455	627216.64	4180020.87	0.55770
627236.64	4180020.87	0.51573	627271.90	4180021.96	0.45066
627149.51	4180071.09	0.59395	627199.25	4180064.59	0.50942
627219.25	4180064.59	0.47467	627239.25	4180064.59	0.44297
627253.68	4180063.97	0.42265	627273.68	4180063.97	0.39539
627149.51	4180091.09	0.54498	627149.51	4180111.09	0.50022
627187.79	4180096.84	0.46919	627207.79	4180096.84	0.44003
627227.79	4180096.84	0.41293	627247.79	4180096.84	0.38788
627267.79	4180096.84	0.36473	627149.20	4180123.97	0.47386
627149.20	4180143.97	0.43519	627187.95	4180142.66	0.39430
627207.95	4180142.66	0.37352	627227.95	4180142.66	0.35372
627247.95	4180142.66	0.33505	627267.95	4180142.66	0.31746
627149.20	4180163.97	0.39998	627149.20	4180183.97	0.36802

*** AERMOD - VERSION 19191 *** *** SOLT-01 Construction HRA
 *** AERMET - VERSION 14134 *** *** Tracy

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ONSITE ***
 INCLUDING SOURCE(S): 1 ,

*** 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
627187.79	4180176.84	0.34639		627207.79	4180176.84	0.33035
627227.79	4180176.84	0.31490		627247.79	4180176.84	0.30013
627267.79	4180176.84	0.28607	Preschool MER	627149.20	4180203.97	0.33908
627188.23	4180222.46	0.29190		627208.23	4180222.46	0.28051
627228.23	4180222.46	0.26936		627248.23	4180222.46	0.25858
627268.23	4180222.46	0.24817				

*** AERMOD - VERSION 19191 ***
*** AERMET - VERSION 14134 ***

*** SOLT-01 Construction HRA
*** Tracy

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: OFFSITE ***
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
627156.64	4179800.87	3.74977	627192.30	4179797.46	4.19320
627212.30	4179797.46	4.28390	627232.30	4179797.46	4.34358
627252.30	4179797.46	4.32630	627272.30	4179797.46	4.15613
627149.72	4179827.43	2.44257	627149.72	4179847.43	1.89158
627196.64	4179840.87	2.11401	627216.64	4179840.87	2.12301
627236.64	4179840.87	2.11553	627149.72	4179867.43	1.51529
627271.90	4179851.76	1.76198	627149.72	4179887.43	1.24466
627197.00	4179870.67	1.49479	627229.72	4179871.76	1.47313
627271.90	4179881.96	1.26915	627149.72	4179907.43	1.04109
627197.00	4179890.67	1.22505	627229.72	4179891.76	1.20623
627271.90	4179901.96	1.05433	627149.72	4179927.43	0.88279
627197.00	4179910.67	1.02386	627229.72	4179911.76	1.00774
627271.90	4179921.96	0.89187	627149.72	4179947.43	0.75681
627197.00	4179930.67	0.86893	627229.72	4179931.76	0.85528
627271.90	4179941.96	0.76523	627149.72	4179967.43	0.65480
627197.00	4179950.67	0.74636	627229.72	4179951.76	0.73503
627271.90	4179961.96	0.66407	627149.72	4179987.43	0.57103
627197.00	4179970.67	0.64735	627229.72	4179971.76	0.63813
627271.90	4179981.96	0.58174	627149.72	4180007.43	0.50159
627197.00	4179990.67	0.56566	627229.72	4179991.76	0.55882
627271.90	4180001.96	0.51359	627196.64	4180020.87	0.46757
627216.64	4180020.87	0.46763	627236.64	4180020.87	0.46609
627271.90	4180021.96	0.45630	627149.51	4180071.09	0.34686
627199.25	4180064.59	0.36504	627219.25	4180064.59	0.36559
627239.25	4180064.59	0.36517	627253.68	4180063.97	0.36529
627273.68	4180063.97	0.36256	627149.51	4180091.09	0.31275
627149.51	4180111.09	0.28333	627187.79	4180096.84	0.30787
627207.79	4180096.84	0.30906	627227.79	4180096.84	0.30950
627247.79	4180096.84	0.30914	627267.79	4180096.84	0.30775
627149.20	4180123.97	0.26644	627149.20	4180143.97	0.24305
627187.95	4180142.66	0.24778	627207.95	4180142.66	0.24890
627227.95	4180142.66	0.24948	627247.95	4180142.66	0.24946
627267.95	4180142.66	0.24872	627149.20	4180163.97	0.22253
627149.20	4180183.97	0.20443	627187.79	4180176.84	0.21337

627207.79	4180176.84	0.21439		627227.79	4180176.84	0.21502
627247.79	4180176.84	0.21516		627267.79	4180176.84	0.21472
627149.20	4180203.97	0.18839		627188.23	4180222.46	0.17769
627208.23	4180222.46	0.17869		627228.23	4180222.46	0.17933
627248.23	4180222.46	0.17954		627268.23	4180222.46	0.17928
627003.22	4179681.41	7.90693	Residential MER	627059.25	4179681.41	6.80206

*** AERMOD - VERSION 19191 *** ** SOLT-01 Construction HRA
*** AERMET - VERSION 14134 *** ** Tracy

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: OFFSITE ***
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
627119.05	4179671.97	4.73403	627113.39	4179642.38	2.90345
627112.13	4179564.95	1.09638	627111.50	4179590.76	1.46529
627115.90	4179501.37	0.60905	627120.94	4179533.47	0.80643
627159.97	4179673.23	4.24160	627185.15	4179694.00	5.95319
627173.19	4179619.09	1.80374	627165.64	4179571.88	1.10285
627171.30	4179532.85	0.77206	627173.19	4179486.26	0.52434
627249.86	4180223.03	0.17914	627156.64	4179800.87	3.15052
627192.30	4179797.46	3.45100	627212.30	4179797.46	3.50830
627232.30	4179797.46	3.55370	627252.30	4179797.46	3.55306
627272.30	4179797.46	3.46997	627149.72	4179827.43	2.15984
627149.72	4179847.43	1.71080	627196.64	4179840.87	1.89244
627216.64	4179840.87	1.90359	627236.64	4179840.87	1.90733
627149.72	4179867.43	1.39240	627271.90	4179851.76	1.63193
627149.72	4179887.43	1.15817	627197.00	4179870.67	1.37740
627229.72	4179871.76	1.37112	627271.90	4179881.96	1.20283
627149.72	4179907.43	0.97904	627197.00	4179890.67	1.14635
627229.72	4179891.76	1.14131	627271.90	4179901.96	1.01098
627149.72	4179927.43	0.83909	627197.00	4179910.67	0.96938
627229.72	4179911.76	0.96516	627271.90	4179921.96	0.86353
627149.72	4179947.43	0.72573	627197.00	4179930.67	0.83100
627229.72	4179931.76	0.82724	627271.90	4179941.96	0.74686
627149.72	4179967.43	0.63332	627197.00	4179950.67	0.72073
627229.72	4179951.76	0.71694	627271.90	4179961.96	0.65245
627149.72	4179987.43	0.55677	627197.00	4179970.67	0.62996
627229.72	4179971.76	0.62689	627271.90	4179981.96	0.57441
627149.72	4180007.43	0.49207	627197.00	4179990.67	0.55526
627229.72	4179991.76	0.55175	627271.90	4180001.96	0.50913
627196.64	4180020.87	0.46251	627216.64	4180020.87	0.46343
627236.64	4180020.87	0.46278	627271.90	4180021.96	0.45387
627149.51	4180071.09	0.34424	627199.25	4180064.59	0.36236
627219.25	4180064.59	0.36333	627239.25	4180064.59	0.36338
627253.68	4180063.97	0.36383	627273.68	4180063.97	0.36157
627149.51	4180091.09	0.31092	627149.51	4180111.09	0.28211
627187.79	4180096.84	0.30661	627207.79	4180096.84	0.30790

627227.79	4180096.84	0.30865
627267.79	4180096.84	0.30751
627149.20	4180143.97	0.24257
627207.95	4180142.66	0.24853
627247.95	4180142.66	0.24949
627149.20	4180163.97	0.22237

627247.79	4180096.84	0.30860
627149.20	4180123.97	0.26555
627187.95	4180142.66	0.24738
627227.95	4180142.66	0.24931
627267.95	4180142.66	0.24894
627149.20	4180183.97	0.20452

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 *** AERMET - VERSION 14134 *** *** Tracy

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*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: OFFSITE ***
 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
627187.79	4180176.84	0.21356	627207.79	4180176.84	0.21463
627227.79	4180176.84	0.21537	627247.79	4180176.84	0.21561
627267.79	4180176.84	0.21525	627149.20	4180203.97	0.18866
627188.23	4180222.46	0.17808	627208.23	4180222.46	0.17908
627228.23	4180222.46	0.17978	627248.23	4180222.46	0.18006
627268.23	4180222.46	0.17986			

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*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***

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

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ONSITE	1ST HIGHEST VALUE IS	1.56105 AT (627003.22, 4179681.41,	49.86, 49.86,	1.50)	DC
	2ND HIGHEST VALUE IS	1.29951 AT (627059.25, 4179681.41,	48.78, 48.78,	1.50)	DC
	3RD HIGHEST VALUE IS	1.27577 AT (627149.72, 4179827.43,	46.88, 46.88,	6.10)	DC
	4TH HIGHEST VALUE IS	1.25896 AT (627149.72, 4179827.43,	46.88, 46.88,	1.50)	DC
	5TH HIGHEST VALUE IS	1.25715 AT (627149.72, 4179847.43,	46.71, 46.71,	6.10)	DC
	6TH HIGHEST VALUE IS	1.23997 AT (627149.72, 4179847.43,	46.71, 46.71,	1.50)	DC
	7TH HIGHEST VALUE IS	1.22727 AT (627156.64, 4179800.87,	46.92, 46.92,	6.10)	DC
	8TH HIGHEST VALUE IS	1.22463 AT (627149.72, 4179867.43,	46.52, 46.52,	6.10)	DC
	9TH HIGHEST VALUE IS	1.21252 AT (627156.64, 4179800.87,	46.92, 46.92,	1.50)	DC
	10TH HIGHEST VALUE IS	1.20731 AT (627149.72, 4179867.43,	46.52, 46.52,	1.50)	DC
OFFSITE	1ST HIGHEST VALUE IS	7.90693 AT (627003.22, 4179681.41,	49.86, 49.86,	1.50)	DC
	2ND HIGHEST VALUE IS	6.80206 AT (627059.25, 4179681.41,	48.78, 48.78,	1.50)	DC
	3RD HIGHEST VALUE IS	5.95319 AT (627185.15, 4179694.00,	46.09, 46.09,	1.50)	DC
	4TH HIGHEST VALUE IS	4.73403 AT (627119.05, 4179671.97,	47.53, 47.53,	1.50)	DC
	5TH HIGHEST VALUE IS	4.34358 AT (627232.30, 4179797.46,	45.70, 45.70,	1.50)	DC
	6TH HIGHEST VALUE IS	4.32630 AT (627252.30, 4179797.46,	45.30, 45.30,	1.50)	DC
	7TH HIGHEST VALUE IS	4.28390 AT (627212.30, 4179797.46,	46.09, 46.09,	1.50)	DC
	8TH HIGHEST VALUE IS	4.24160 AT (627159.97, 4179673.23,	46.70, 46.70,	1.50)	DC
	9TH HIGHEST VALUE IS	4.19320 AT (627192.30, 4179797.46,	46.41, 46.41,	1.50)	DC
	10TH HIGHEST VALUE IS	4.15613 AT (627272.30, 4179797.46,	44.90, 44.90,	1.50)	DC

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

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL RURAL

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

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

A Total of 0 Fatal Error Message(s)
A Total of 1 Warning Message(s)
A Total of 15235 Informational Message(s)

A Total of 43872 Hours Were Processed

A Total of 13448 Calm Hours Identified

A Total of 1787 Missing Hours Identified (4.07 Percent)

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

***** WARNING MESSAGES *****
MX W481 43873 MAIN: Data Remaining After End of Year. Number of Hours= 48

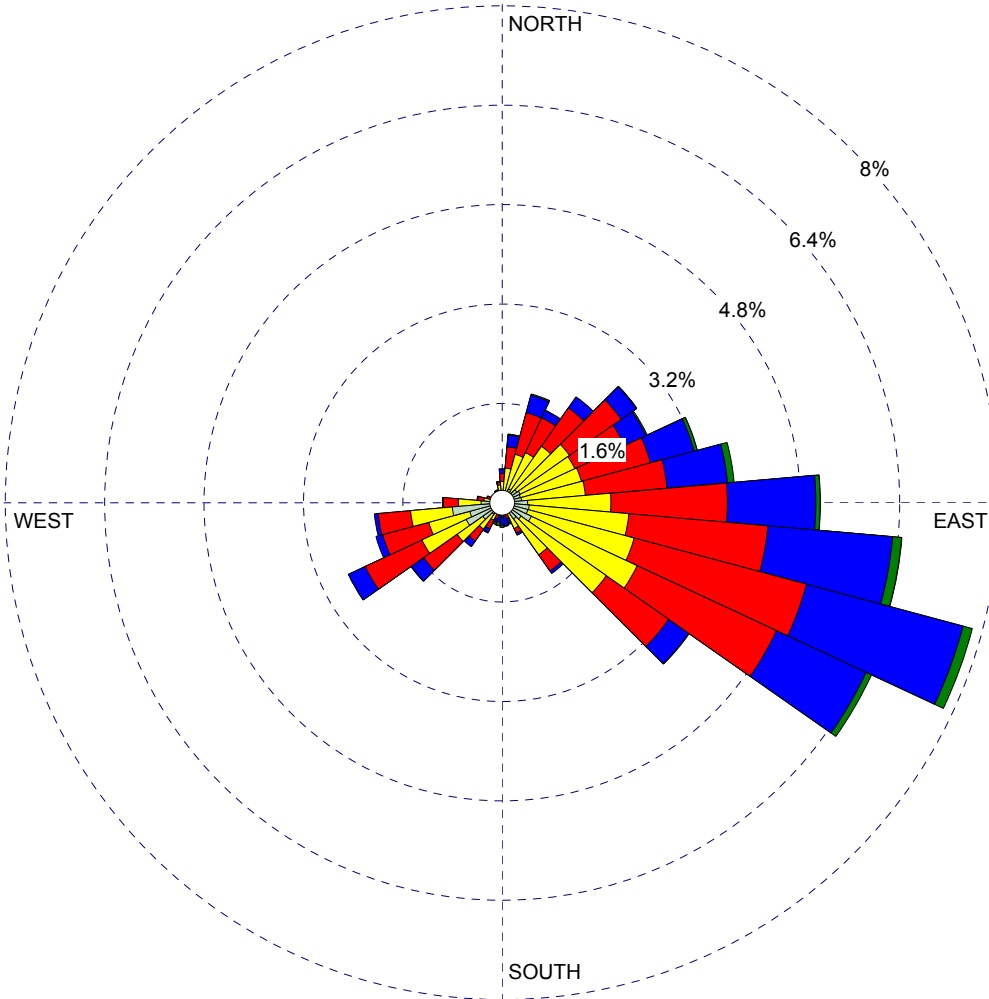
*** AERMOD Finishes Successfully ***

WIND ROSE PLOT:

Station #23285

DISPLAY:

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



WIND SPEED
(m/s)

- ≥ 11.10
- 8.80 - 11.10
- 5.70 - 8.80
- 3.60 - 5.70
- 2.10 - 3.60
- 0.50 - 2.10

Calms: 30.65%

COMMENTS:

DATA PERIOD:

**Start Date: 1/1/2009 - 00:00
End Date: 1/2/2014 - 23:59**

COMPANY NAME:

MODELER:

CALM WINDS:

30.65%

TOTAL COUNT:

42342 hrs.

AVG. WIND SPEED:

2.83 m/s

DATE:

1/27/2022

PROJECT NO.:

Appendix C. Construction Risk Calculations

**Table C1
Residential MER Concentrations for Health Risk Calculations**

Contaminant (a)	Source (b)		Model Output ¹ ($\mu\text{g}/\text{m}^3$) (c)	Emission Rates ² (g/s) (d)	MEIR Conc. ($\mu\text{g}/\text{m}^3$) (e)	Total MEIR Conc. Annual Average ($\mu\text{g}/\text{m}^3$) (f)
Residential Receptors - Unmitigated						
DPM	2022	On-Site Emissions	1.56	1.23E-03	1.93E-03	1.93E-03
		Truck Route	7.91	6.45E-07	5.10E-06	
Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations						
PM _{2.5}	2022	On-Site Emissions	1.56	1.13E-03	1.76E-03	1.76E-03
		Truck Route	7.91	6.45E-07	5.10E-06	
Maximum Annual PM_{2.5} Concentration						0.002

Maximum Exposed Individual Resident (MEIR) UTM coordinates: 627003.22E, 4179681.41N

¹ Model Output at the MEIR based on unit emission rates for sources (1 g/s).

² Emission Rates from Emission Rate Calculations (Appendix A - Construction Emissions).

**Table C2
Residential MER Health Risk Calculations**

Source (a)	MEIR	Weight	Contaminant (d)	URF ($\mu\text{g}/\text{m}^3$) ⁻¹ (e)	CPF ($\text{mg}/\text{kg}/\text{day}$) ⁻¹ (f)	Dose (by age bin)		Carcinogenic Risks (by age bin)		Total Cancer Risk per million (k)	Chronic Hazards ³		
	Conc. ($\mu\text{g}/\text{m}^3$) (b)	Fraction (c)				3rd Trimester	0 < 2 years	3rd Trimester	0 < 2 years		REL ($\mu\text{g}/\text{m}^3$) (l)	RESP (m)	
						($\text{mg}/\text{kg}\text{-day}$) (g)	($\text{mg}/\text{kg}\text{-day}$) (h)	per million (i)	per million (j)				
Residential Receptors - Unmitigated													
2022	On & Off Site Emission	1.93E-03	1.00E+00	DPM	3.0E-04	1.1E+00	6.68E-07	2.02E-06	2.13E-02	6.43E-02	0.1	5.0E+00	3.86E-04
Total											0.1	0.0004	

Maximum Exposed Individual Resident (MEIR) UTM coordinates: 627003.22E, 4179681.41N

	OEHHA age bin exposure year(s)	3rd Trimester 2022	0 < 2 2022
Dose Exposure Factors:	exposure frequency (days/year)	350	350
	inhalation rate (L/kg-day) ¹	361	1090
	inhalation absorption factor	1	1
	conversion factor ($\text{mg}/\mu\text{g}; \text{m}^3/\text{L}$)	1.0E-06	1.0E-06
Risk Calculation Factors:	age sensitivity factor	10	10
	averaging time (years) per million	70	70
		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	Duration ²	3rd Trimester	0 < 2 years
2022	0.18	0.25	0.25
Total	0.50	0.25	0.25

¹ Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015)

² Construction duration determined for each year of construction to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions). Since construction duration is less than 6 months, per OEHHA 2015 guidance health risks determined for 6 months (0.5 year).

³ Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint

Table C3
Day Care/High School MER Concentrations for Risk Calculations

Contaminant (a)	Source (b)	Model Output ¹ ($\mu\text{g}/\text{m}^3$) (c)	Emission Rates ² (g/s) (d)	MER Conc. ($\mu\text{g}/\text{m}^3$) (e)	Total MER Conc. Annual Average ($\mu\text{g}/\text{m}^3$) (f)	
Preschool Receptors - Unmitigated						
DPM	2022	On-Site Emissions	0.29	1.23E-03	3.53E-04	3.53E-04
		Truck Route	0.22	6.45E-07	1.39E-07	
Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations						
PM _{2.5}	2022	On-Site Emissions	0.29	1.13E-03	3.22E-04	3.22E-04
		Truck Route	0.22	6.45E-07	1.39E-07	
Maximum Annual PM_{2.5} Concentration					0.0003	
Sunshine Shwetha Preschool/Daycare UTM coordinates: 627267.79 E, 4180176.84 N						

¹ Model Output at the MER based on unit emission rates for sources (1 g/s).

² Emission Rates from Emission Rate Calculations (Appendix A - Construction Emissions).

**Table C4
Day Care/High School MER Health Risk Calculations**

Source (a)	MER Conc. ($\mu\text{g}/\text{m}^3$) (b)	Weight Fraction (c)	Contaminant		CPF ($\text{mg}/\text{kg}/\text{day}$) ¹ (f)	Dose (by age bin)		Carcinogenic Risks (by age bin)		Total Cancer Risk per million (m)	Chronic Hazards ³		
	URF ($\mu\text{g}/\text{m}^3$) ⁻¹ (e)	REL ($\mu\text{g}/\text{m}^3$) (n)	RESP (o)	0 < 2 years		0 < 2 years							
				(g)		(h)	(j)	(k)					
Preschool Receptors - Unmitigated													
2022	On & Off Site	3.53E-04	1.00E+00	DPM	3.0E-04	1.1E+00		3.02E-07		2.26E-02	0.023	5.0E+00	7.06E-05
Total											0.023	0.0001	

	OEHHA age bin exposure year(s)	0 < 2 years 2022
Dose Exposure Factors:	exposure frequency (days/year)	260
	8-hour inhalation rate ($\text{L}/\text{kg}\text{-day}$) ¹	1200
	inhalation absorption factor	1
	conversion factor ($\text{mg}/\mu\text{g}; \text{m}^3/\text{L}$)	1.0E-06
Risk Calculation Factors:	age sensitivity factor	10
	averaging time (years)	70
	per million	1.0E+06
exposure durations per age bin		exposure durations (year)
Construction Year		Duration ²
2022		0.18
Total		0.50

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

² Construction duration determined for each year of construction to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions). Since construction duration is less than 6 months, per OEHHA 2015 guidance health risks determined for 6 months (0.5 year).

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