APPENDIX B

COMMUNITY HEALTH RISK ASSESSMENT

1. Health Risk Assessment

1.1 CONSTRUCTION HEALTH RISK ASSESSMENT

The Martin Group, the project applicant, is proposing the Callan and E. 14th Street Project (proposed project or project). The project is a five-floor mixed-use residential and retail building at 1188 E. 14th Street in the City of San Leandro. The 1.6-acre project site is bounded by Chumalia Street to the north, Hyde Street to the east, Callan Avenue to the south and E. 14th Street to the west, in the City of San Leandro, Alameda County, California. The proposed project would involve demolition, site preparation, grading, building construction, architectural coating, and paving. 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 2021 and be completed by March 2023 (approximately 435 workdays). The nearest sensitive receptors to the project site include the multifamily apartments to the east of the site along Hyde Street. 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 residences 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 (children at the nearby residences) from construction emissions at the project site, including diesel equipment exhaust (diesel particulate matter or DPM) and fine 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).

In addition to the nearby residential receptors, a survey of additional sensitive receptor types was conducted. The closet school to the project site is St. Leander School located 825 feet to the southwest of the site. In general, school-based sensitive receptors would be present on-site fewer hours per day (i.e., typically 8 hours per day) as compared to residential receptors (i.e., 24 hours per day). Additionally, the school site is located upwind of the project as the predominant wind direction is toward the east (described in Section 1.4 below). Given the distance to the school site and short exposure frequency of school-based receptors, the health risk determination was conservatively based on the nearby residential receptors, and the school receptors were omitted from the evaluation.

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 $\mu g/m^3$

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 2016.3.2 (CAPCOA, 2016). DPM emissions were based on the CalEEMod construction runs, using annual exhaust PM_{10} 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 20 months (435 workdays) from beginning of July 2021 and be completed by March 2023. 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., 2021, 2022, and 2023). The off-site hauling emission rates were adjusted to evaluate localized emissions from the 0.23-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 (Metro Oakland International Airport) with the five latest available years (2009 to 2013) of record were used to represent local weather conditions and prevailing winds. The prevailing wind direction at the Metro Oakland International Airport met station is to the east, and the wind rose is provided in Appendix A.

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, and 9.1 m for 3rd floor) 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 residents 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 receptor (MER). The MER is the multifamily residences east of the site along Hyde Street. 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 ($10x10^{-6}$) 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 ($\mu g/m^3$) 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 $(mg/kg/day)^{-1}$ to derive the cancer risk estimate. Therefore, to accommodate the unique exposures associated with the sensitive receptors, the following dose algorithm was used.

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

Where:

$Dose_{AIR}$	=	dose by inhalation (mg/kg-day), per age group
C_{air}	=	concentration of contaminant in air ($\mu g/m^3$)
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 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). 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:

Age Groups	BR/BW (L/kg-day)	ED	ASF	FAH

Third trimester	361	0.25	10	0.85
0-2 age group	1,090	2	10	0.85
2-9 age group	861	7	3	0.72
2-16 age group	745	14	3	0.72
16-30 age group	335	14	1	0.73
16-70 age group	290	54	1	0.73

For construction analysis, the exposure duration spans the length of construction (e.g., 435 workdays, approximately 1.67 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.

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

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

Where:

Dose_{AIR}	=	dose by inhalation (mg/kg-day), per age group
CPF	=	cancer potency factor, chemical-specific $(\text{mg/kg-day})^{-1}$
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 $1x10^6$ (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 $\mu g/m^3$ 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	$PM_{2.5}$ ($\mu g/m^3$)
Maximum Exposed Receptor - Resident	54.7	0.166	0.41
BAAQMD Threshold	10	1.0	0.30
Exceeds Threshold?	Yes	No	Yes

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.

Cancer risk for the maximum exposed receptor from project-related construction emissions was calculated to be 54.7 in a million, which would 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 MER consists of a pregnant woman in the third trimester that subsequently gives birth to an infant during the approximately 20-month construction period; therefore, all calculated risk values were multiplied by a factor of 10. In addition, it was conservatively assumed that the residents were outdoors 8 hours a day and exposed to all of the daily construction emissions.

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. Additionally, the maximum annual $PM_{2.5}$ concentration of 0.41 $\mu g/m^3$ would also exceed the BAAQMD significance threshold of 0.3 micrograms per cubic meter ($\mu g/m^3$) for all the off-site MER.

Because cancer risk and the maximum annual $PM_{2.5}$ concentration for the MER would exceed BAAQMD's significance thresholds due to construction activities associated with the proposed project, the following mitigation measure is proposed:

> **Mitigation Measure AQ-1:** The proposed project's construction contractors shall use equipment that meets the United States Environmental Protection Agency Tier 4 interim emissions standards

for off-road diesel-powered construction equipment with more than 25 horsepower, unless it can be demonstrated that such equipment is not available. 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 regulations. The requirement to use Tier 4 interim equipment for engines over 25 horsepower shall be identified in construction bids.

- Have engines that meet either US EPA or California Air Resources Board (CARB) Tier 4 Interim emission standards. Ensure that all construction plans clearly show the selected emission reduction strategy for construction equipment over 25 horsepower.

- Maintain a list of all operating equipment in use on the project site for verification by the City of San Leandro Community Development Department/Building Division. 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.

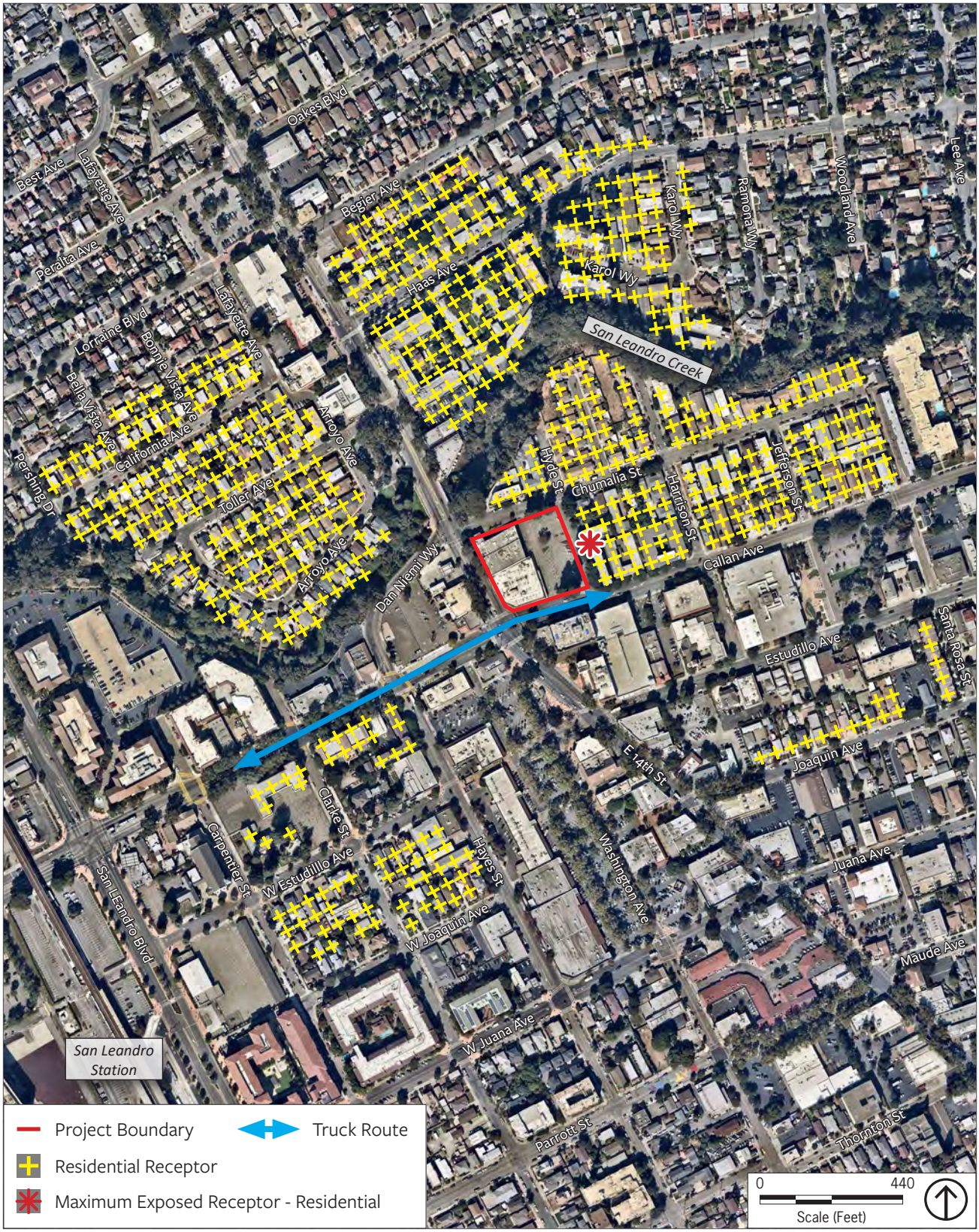
- Communicate with all sub-contractors in contracts and construction documents that all non-essential idling of construction equipment is restricted to 5 minutes or less in compliance with California Air Resources Board Rule 2449 and is responsible for ensuring that this requirement is met.

Mitigation Measure AQ-1 would reduce the project's localized construction emissions, as shown in the following table. The results indicate that, with mitigation, cancer risk and the maximum annual $PM_{2.5}$ concentration would be less than the BAAQMD's significance thresholds for residential-based receptors. 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* with mitigation.

TABLE 2 CONSTRUCTION RISK SUMMARY – MITIGATED

Receptor	Cancer Risk (per million)	Chronic Hazards	$PM_{2.5}$ ($\mu g/m^3$)[a]
Maximum Exposed Receptor – Resident	4.9	0.013	0.026
BAAQMD Threshold	10	1.0	0.3
Exceeds Threshold?	No	No	No

Risks incorporate Mitigation Measure AQ-1, which includes using construction equipment which meets USEPA Tier 4 Interim engine requirements for equipment over 25 horsepower.
Note: Cancer risk calculated using 2015 OEHHA HRA guidance.



Source: Nearmap, 2021

Figure 1
Project Site and Off-Site Receptor Locations

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.

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California Air Pollution Control Officers Association (CAPCOA). 2016. California Emissions Estimator Model (CalEEMod). Version 2016.3.2. 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.*

———. 2021. *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

Construction Emissions - DPM and PM2.5
Input to Risk Tables

Average Daily Emissions and Emission Rates: Unmitigated Scenario

Onsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2021	0.58	7.21E-02	9.08E-03
2022	0.31	3.90E-02	4.92E-03
2023	0.21	2.58E-02	3.25E-03

Onsite Construction PM2.5 Exhaust Emissions[2]

Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2021	0.54	6.81E-02	8.58E-03
2022	0.30	3.77E-02	4.75E-03
2023	0.19	2.44E-02	3.07E-03

Offsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day) [3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
2021	1.44E-02	1.68E-04	2.10E-05	2.65E-06
2022	1.77E-02	2.07E-04	2.58E-05	3.25E-06
2023	4.19E-03	4.89E-05	6.11E-06	7.70E-07

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)
2021	1.33E-02	1.56E-04	1.95E-05	2.45E-06
2022	1.65E-02	1.93E-04	2.41E-05	3.04E-06
2023	3.72E-03	4.35E-05	5.43E-06	6.84E-07

Note: Emissions evenly distributed over 25 modeled volume sources.

Hauling Length (miles)	20	miles
Haul Length within 1,000 ft of Site (mile) [3]	0.23	miles
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks) [4]	8	hours

Year	Workdays	Risk Scalar [5]
2021	132	0.51
2022	260	1.00
2023	43	0.17

[1] DPM emissions taken as PM_{10} 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 0.23-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] Risk scalars determined for each year of construction to adjust receptor exposures to the exposure durations for each construction year (see App C - Risk Calculations).

Construction Emissions - DPM and PM2.5
Input to Risk Tables
With Mitigation - Tier 4 Final Engines for Eq. > 50 hp

Average Daily Emissions and Emission Rates: Mitigated Scenario

Onsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2021	0.03	4.20E-03	5.30E-04
2022	0.03	4.14E-03	5.22E-04
2023	0.02	2.62E-03	3.30E-04

Onsite Construction PM2.5 Exhaust Emissions[2]

Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2021	0.03	4.20E-03	5.30E-04
2022	0.03	4.14E-03	5.22E-04
2023	0.02	2.62E-03	3.30E-04

Offsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day) [3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
2021	1.44E-02	1.68E-04	2.10E-05	2.65E-06
2022	1.77E-02	2.07E-04	2.58E-05	3.25E-06
2023	4.19E-03	4.89E-05	6.11E-06	7.70E-07

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)
2021	1.33E-02	1.56E-04	1.95E-05	2.45E-06
2022	1.65E-02	1.93E-04	2.41E-05	3.04E-06
2023	3.72E-03	4.35E-05	5.43E-06	6.84E-07

Note: Emissions evenly distributed over 25 modeled volume sources.

Hauling Length (miles)	20	miles
Haul Length within 1,000 ft of Site (mile) [3]	0.23	miles
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks) [4]	8	hours

Year	Workdays	Risk Scalar [5]
2021	132	0.51
2022	260	1.00
2023	43	0.17

[1] DPM emissions taken as PM_{10} 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 0.23-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] Risk scalars determined for each year of construction to adjust receptor exposures to the exposure durations for each construction year (see App C - Risk Calculations).

Appendix B. Air Dispersion Model Output

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

                                        ***   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 URBAN Dispersion Algorithm for the SBL for   26 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   1671000.0 ; Urban Roughness Length = 1.000 m

**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.
        6. Urban Roughness Length of 1.0 Meter Assumed.

**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 PERIOD Averages Only

**This Run Includes: 26 Source(s);   2 Source Group(s); and   769 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 25 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 PERIOD 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) =     1.80 ;  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:   COSL-04.err
**File for Summary of Results:   COSL-04.sum
```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** 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	0.40000E-01	574374.0	4175757.2	18.2	4.15	6.93	3.26	YES	HRDOW
L0000002	0	0.40000E-01	574359.8	4175752.8	18.1	4.15	6.93	3.26	YES	HRDOW
L0000003	0	0.40000E-01	574345.5	4175748.5	18.0	4.15	6.93	3.26	YES	HRDOW
L0000004	0	0.40000E-01	574331.3	4175744.1	18.0	4.15	6.93	3.26	YES	HRDOW
L0000005	0	0.40000E-01	574317.1	4175739.7	18.0	4.15	6.93	3.26	YES	HRDOW
L0000006	0	0.40000E-01	574303.1	4175734.7	18.1	4.15	6.93	3.26	YES	HRDOW
L0000007	0	0.40000E-01	574290.0	4175727.6	18.0	4.15	6.93	3.26	YES	HRDOW
L0000008	0	0.40000E-01	574276.9	4175720.4	17.9	4.15	6.93	3.26	YES	HRDOW
L0000009	0	0.40000E-01	574263.8	4175713.3	17.7	4.15	6.93	3.26	YES	HRDOW
L0000010	0	0.40000E-01	574250.7	4175706.2	17.7	4.15	6.93	3.26	YES	HRDOW
L0000011	0	0.40000E-01	574237.6	4175699.1	17.7	4.15	6.93	3.26	YES	HRDOW
L0000012	0	0.40000E-01	574224.6	4175692.0	17.6	4.15	6.93	3.26	YES	HRDOW
L0000013	0	0.40000E-01	574211.5	4175684.8	17.3	4.15	6.93	3.26	YES	HRDOW
L0000014	0	0.40000E-01	574198.4	4175677.7	17.2	4.15	6.93	3.26	YES	HRDOW
L0000015	0	0.40000E-01	574185.3	4175670.6	17.2	4.15	6.93	3.26	YES	HRDOW
L0000016	0	0.40000E-01	574172.2	4175663.5	17.3	4.15	6.93	3.26	YES	HRDOW
L0000017	0	0.40000E-01	574159.1	4175656.4	17.4	4.15	6.93	3.26	YES	HRDOW
L0000018	0	0.40000E-01	574146.0	4175649.2	17.3	4.15	6.93	3.26	YES	HRDOW
L0000019	0	0.40000E-01	574132.9	4175642.1	17.2	4.15	6.93	3.26	YES	HRDOW
L0000020	0	0.40000E-01	574119.8	4175635.0	17.2	4.15	6.93	3.26	YES	HRDOW
L0000021	0	0.40000E-01	574106.8	4175627.9	17.1	4.15	6.93	3.26	YES	HRDOW
L0000022	0	0.40000E-01	574093.7	4175620.8	16.9	4.15	6.93	3.26	YES	HRDOW
L0000023	0	0.40000E-01	574080.6	4175613.6	17.0	4.15	6.93	3.26	YES	HRDOW
L0000024	0	0.40000E-01	574067.5	4175606.5	17.2	4.15	6.93	3.26	YES	HRDOW
L0000025	0	0.40000E-01	574054.4	4175599.4	17.1	4.15	6.93	3.26	YES	HRDOW

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** 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	0.15066E-03	574298.6	4175749.7	18.2	4.15	5	1.93	YES	HRDOW

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** 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 ,

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
	1671000.	1 , 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 ,

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

* 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

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

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

SOURCE ID = L0000001 TO L0000025   ; 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	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

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

                                              *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                                 (1=YES; 0=NO)

           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 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

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                    *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                                 (METERS/SEC)

                                                 1.54,   3.09,   5.14,   8.23,  10.80,
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

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

  Surface file: metdata-1.8m\724930\724930.SFC   Met Version: 14134
  Profile file: metdata-1.8m\724930\724930.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:   23230   Upper air station no.:   23230
                Name: OAKLAND/WSO_AP   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	-17.2	0.303	-9.000	-9.000	-999.	401.	147.2	0.63	0.86	1.00	2.36	81.	10.0	282.5	2.0
09	01	01	1	02	-21.8	0.383	-9.000	-9.000	-999.	569.	234.6	0.63	0.86	1.00	2.86	68.	10.0	282.0	2.0
09	01	01	1	03	-26.3	0.460	-9.000	-9.000	-999.	749.	337.1	0.63	0.86	1.00	3.36	84.	10.0	280.9	2.0
09	01	01	1	04	-15.4	0.270	-9.000	-9.000	-999.	368.	116.1	0.47	0.86	1.00	2.36	53.	10.0	280.9	2.0
09	01	01	1	05	-26.3	0.460	-9.000	-9.000	-999.	749.	336.3	0.63	0.86	1.00	3.36	73.	10.0	280.4	2.0
09	01	01	1	06	-21.9	0.383	-9.000	-9.000	-999.	573.	232.9	0.63	0.86	1.00	2.86	82.	10.0	280.4	2.0
09	01	01	1	07	-22.0	0.383	-9.000	-9.000	-999.	569.	232.5	0.63	0.86	1.00	2.86	95.	10.0	279.9	2.0
09	01	01	1	08	-11.2	0.196	-9.000	-9.000	-999.	238.	60.6	0.63	0.86	0.76	1.76	73.	10.0	279.9	2.0
09	01	01	1	09	-2.2	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	0.86	0.39	0.00	0.	10.0	280.4	2.0
09	01	01	1	10	6.8	0.266	0.264	0.016	98.	329.	-250.8	0.63	0.86	0.27	1.76	91.	10.0	280.9	2.0
09	01	01	1	11	15.5	-9.000	-9.000	-9.000	177.	-999.	-99999.0	0.45	0.86	0.22	0.00	0.	10.0	282.0	2.0
09	01	01	1	12	96.1	0.393	1.019	0.014	401.	591.	-57.4	0.22	0.86	0.21	3.36	266.	10.0	281.4	2.0
09	01	01	1	13	102.5	0.395	1.092	0.014	462.	595.	-54.4	0.22	0.86	0.20	3.36	283.	10.0	282.0	2.0
09	01	01	1	14	89.9	0.297	1.066	0.015	489.	394.	-26.5	0.22	0.86	0.21	2.36	249.	10.0	282.0	2.0
09	01	01	1	15	62.1	0.383	0.954	0.014	507.	569.	-82.1	0.22	0.86	0.24	3.36	242.	10.0	282.5	2.0
09	01	01	1	16	23.1	0.665	0.690	0.006	513.	1300.	-1150.4	0.52	0.86	0.33	4.86	304.	10.0	282.5	2.0
09	01	01	1	17	-37.0	0.486	-9.000	-9.000	-999.	846.	280.6	0.22	0.86	0.56	4.86	291.	10.0	281.4	2.0
09	01	01	1	18	-52.2	0.480	-9.000	-9.000	-999.	799.	191.9	0.52	0.86	1.00	3.86	307.	10.0	280.9	2.0
09	01	01	1	19	-25.6	0.224	-9.000	-9.000	-999.	327.	39.8	0.52	0.86	1.00	2.36	334.	10.0	280.4	2.0
09	01	01	1	20	-11.1	0.119	-9.000	-9.000	-999.	115.	13.8	0.52	0.86	1.00	1.76	317.	10.0	280.4	2.0
09	01	01	1	21	-10.3	0.119	-9.000	-9.000	-999.	98.	14.7	0.52	0.86	1.00	1.76	320.	10.0	280.4	2.0
09	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	0.86	1.00	0.00	0.	10.0	280.9	2.0
09	01	01	1	23	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	0.86	1.00	0.00	0.	10.0	281.4	2.0
09	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	0.86	1.00	0.00	0.	10.0	281.4	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	81.	2.36	282.6	99.0	-99.00	-99.00

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

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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
574081.99	4175715.56	0.33202	574101.99	4175715.56	0.38371
574021.99	4175735.56	0.23275	574041.99	4175735.56	0.26361
574061.99	4175735.56	0.30149	574081.99	4175735.56	0.34780
574101.99	4175735.56	0.40566	574121.99	4175735.56	0.47789
573981.99	4175755.56	0.19003	574001.99	4175755.56	0.21287
574021.99	4175755.56	0.24023	574061.99	4175755.56	0.31299
574081.99	4175755.56	0.36269	574106.12	4175751.70	0.43664
574121.99	4175755.56	0.50674	573961.99	4175775.56	0.17565
573981.99	4175775.56	0.19570	574001.99	4175775.56	0.21928
574041.99	4175775.56	0.28182	574061.99	4175775.56	0.32397
574081.99	4175775.56	0.37684	574101.99	4175775.56	0.44448
574121.99	4175775.56	0.53297	574141.99	4175775.56	0.65075
573941.99	4175795.56	0.16206	573961.99	4175795.56	0.17981
573981.99	4175795.56	0.20039	574021.99	4175795.56	0.25440
574041.99	4175795.56	0.29029	574061.99	4175795.56	0.33457
574081.99	4175795.56	0.39071	574101.99	4175795.56	0.46167
574141.99	4175795.56	0.68349	574161.99	4175795.56	0.86941
573901.99	4175815.56	0.13706	573921.99	4175815.56	0.15036
573941.99	4175815.56	0.16575	573961.99	4175815.56	0.18373
573981.99	4175815.56	0.20498	574001.99	4175815.56	0.23039
574021.99	4175815.56	0.26100	574041.99	4175815.56	0.29843
574061.99	4175815.56	0.34444	574081.99	4175815.56	0.40303
574101.99	4175815.56	0.47624	574121.99	4175815.56	0.57474
574141.99	4175815.56	0.70932	574161.99	4175815.56	0.89636
574181.99	4175815.56	1.17020	573881.99	4175835.56	0.12747
573901.99	4175835.56	0.13933	573921.99	4175835.56	0.15298
573941.99	4175835.56	0.16882	573961.99	4175835.56	0.18738
573981.99	4175835.56	0.20929	574001.99	4175835.56	0.23545
574041.99	4175835.56	0.30573	574061.99	4175835.56	0.35296
574081.99	4175835.56	0.41274	574101.99	4175835.56	0.48843
574121.99	4175835.56	0.58792	574141.99	4175835.56	0.72428
573861.99	4175855.56	0.11886	573879.60	4175863.12	0.12875
573921.99	4175855.56	0.15543	573941.99	4175855.56	0.17165
573961.99	4175855.56	0.19066	573981.99	4175855.56	0.21307
574001.99	4175855.56	0.23983	574021.99	4175855.56	0.27211
574041.99	4175855.56	0.31155	574081.99	4175855.56	0.42077
574101.99	4175855.56	0.49667	574121.99	4175855.56	0.59519

574141.99	4175855.56	0.72994	573861.99	4175875.56	0.12043
573881.99	4175875.56	0.13117	573901.99	4175875.56	0.14345
573921.99	4175875.56	0.15763	573961.99	4175875.56	0.19341

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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
573981.99	4175875.56	0.21615	574001.99	4175875.56	0.24321
574021.99	4175875.56	0.27575	574041.99	4175875.56	0.31514
574061.99	4175875.56	0.36352	574121.99	4175875.56	0.59392
574141.99	4175875.56	0.72150	573901.99	4175895.56	0.14514
573921.99	4175895.56	0.15948	573941.99	4175895.56	0.17610
573981.99	4175895.56	0.21826	574001.99	4175895.56	0.24530
574021.99	4175895.56	0.27762	574041.99	4175895.56	0.31630
574061.99	4175895.56	0.36324	574081.99	4175895.56	0.42134
574101.99	4175895.56	0.49348	573921.99	4175915.56	0.16086
573941.99	4175915.56	0.17746	573961.99	4175915.56	0.19674
573981.99	4175915.56	0.21930	574021.99	4175915.56	0.27748
574041.99	4175915.56	0.31474	574061.99	4175915.56	0.35919
574081.99	4175915.56	0.41319	573981.99	4175935.56	0.21882
574001.99	4175935.56	0.24455	574021.99	4175935.56	0.27477
574041.99	4175935.56	0.31022	574061.99	4175935.56	0.35199
574081.99	4175935.56	0.40161	574117.40	4175909.67	0.54831
574107.89	4175931.08	0.48752	574128.78	4175596.18	0.27264
574147.97	4175608.31	0.31381	574167.97	4175618.02	0.36010
574128.78	4175616.18	0.30527	574144.33	4175624.27	0.34185
574160.69	4175632.36	0.38691	574192.27	4175647.46	0.50083
574197.93	4175635.73	0.46298	574208.44	4175616.32	0.40005
574195.10	4175607.83	0.35962	574179.73	4175598.93	0.32251
574219.36	4175531.40	0.19172	574233.11	4175538.27	0.20170
574225.02	4175516.44	0.17018	574241.60	4175524.93	0.18040
574203.99	4175518.86	0.17505	574191.46	4175513.61	0.16914
574179.73	4175506.73	0.16156	574184.58	4175494.20	0.14791
574217.74	4175502.28	0.15373	574213.30	4175483.28	0.13475
574223.41	4175487.32	0.13762	574223.41	4175460.63	0.11492
574211.27	4175442.43	0.10336	574203.19	4175462.25	0.11797
574239.18	4175459.82	0.11319	574233.11	4175475.19	0.12577
574252.52	4175478.02	0.12709	574256.97	4175463.87	0.11553
574267.08	4175472.36	0.12222	574138.48	4175484.49	0.13995
574151.02	4175489.34	0.14435	574134.84	4175449.71	0.11390
574140.10	4175442.03	0.10875	574156.28	4175461.03	0.12087
574158.30	4175451.33	0.11383	574167.19	4175437.98	0.10443
574112.24	4175466.61	0.12539	574117.28	4175451.49	0.11535
574125.12	4175436.94	0.10624	574087.62	4175452.61	0.11522

574099.93	4175459.33	0.11999	574099.93	4175424.63	0.09992
574125.12	4175415.67	0.09453	574326.80	4175877.59	6.62936
574331.19	4175864.46	10.34153	574366.80	4175877.59	6.94120

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION   VALUES 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	
574380.37	4175881.02	6.09975	574402.94	4175886.17	4.94325	
574326.80	4175897.59	3.95285	574346.80	4175897.59	4.14665	
574366.80	4175897.59	4.18542	574406.80	4175897.59	3.84442	
574426.80	4175897.59	3.53090	574346.80	4175917.59	2.75454	
574366.80	4175917.59	2.79113	574386.80	4175917.59	2.76052	
574406.80	4175917.59	2.66324	574426.80	4175917.59	2.51147	
574438.43	4175900.08	3.21049	574346.80	4175937.59	1.96944	
574366.80	4175937.59	1.98836	574386.80	4175937.59	1.98104	
574426.80	4175937.59	1.85330	574345.36	4175973.37	1.25513	
574346.80	4175957.59	1.48815	574386.80	4175957.59	1.48152	
574406.80	4175957.59	1.45623	574366.80	4175977.59	1.17488	
574406.80	4175977.59	1.17506	574292.21	4175852.68	8.70389	
574394.80	4175784.17	37.36178	574414.80	4175784.17	22.54830	
574434.80	4175784.17	14.95842	574379.33	4175803.49	48.14294	MER LOCATION
574471.52	4175796.93	8.14592	574394.80	4175804.17	32.54914	
574414.80	4175804.17	20.52180	574434.80	4175804.17	13.85825	
574454.80	4175804.17	10.01543	574466.41	4175815.47	7.90151	
574374.80	4175824.17	37.58013	574394.80	4175824.17	23.71253	
574414.80	4175824.17	15.99896	574434.80	4175824.17	11.40734	
574454.80	4175824.17	8.54964	574374.80	4175844.17	20.44798	
574394.80	4175844.17	14.77394	574414.80	4175844.17	11.11156	
574434.80	4175844.17	8.58625	574454.80	4175844.17	6.78040	
574414.80	4175864.17	7.34531	574434.80	4175864.17	6.11930	
574454.80	4175864.17	5.11836	574309.56	4175859.05	9.34716	
574306.65	4175876.55	5.67757	574496.48	4175809.26	5.62727	
574494.17	4175823.52	5.31548	574514.17	4175823.52	4.30773	
574534.17	4175823.52	3.55498	574554.17	4175823.52	2.97544	
574494.17	4175843.52	4.51794	574514.17	4175843.52	3.74528	
574534.17	4175843.52	3.14384	574554.17	4175843.52	2.66979	
574574.17	4175843.52	2.30230	574594.17	4175843.52	1.99372	
574474.17	4175863.52	4.36161	574494.17	4175863.52	3.68350	
574514.17	4175863.52	3.13893	574534.17	4175863.52	2.69576	
574554.17	4175863.52	2.33446	574594.17	4175863.52	1.79327	
574614.17	4175863.52	1.58309	574634.17	4175863.52	1.40641	
574654.17	4175863.52	1.25638	574474.17	4175883.52	3.35123	
574494.17	4175883.52	2.93363	574514.17	4175883.52	2.57148	
574534.17	4175883.52	2.26088	574554.17	4175883.52	1.99767	

574594.17	4175883.52	1.58190	574614.17	4175883.52	1.41214
574634.17	4175883.52	1.26748	574654.17	4175883.52	1.14331
574463.94	4175912.20	2.37968	574514.17	4175903.52	2.07865

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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
574534.17	4175903.52	1.86843	574554.17	4175903.52	1.68297
574574.17	4175903.52	1.52109	574594.17	4175903.52	1.37378
574614.17	4175903.52	1.24101	574634.17	4175903.52	1.12635
574654.17	4175903.52	1.02688	574474.17	4175923.52	1.95698
574494.17	4175923.52	1.80787	574514.17	4175923.52	1.66420
574530.76	4175928.48	1.47372	574574.17	4175923.52	1.29010
574594.17	4175923.52	1.18217	574614.17	4175923.52	1.08249
574634.17	4175923.52	0.99345	574654.17	4175923.52	0.91407
574474.17	4175943.52	1.53796	574494.17	4175943.52	1.46401
574514.17	4175943.52	1.38257	574534.17	4175943.52	1.28898
574554.17	4175943.52	1.18708	574574.17	4175943.52	1.08635
574634.17	4175943.52	0.86850	574654.17	4175943.52	0.80720
574594.17	4175963.52	0.85642	574614.17	4175963.52	0.80413
574634.17	4175963.52	0.75449	574614.17	4175983.52	0.72106
574634.17	4175983.52	0.66963	574447.89	4175959.39	1.33576
574452.26	4175941.52	1.65955	574571.49	4175959.76	0.95367
574207.00	4175936.44	1.02923	574227.00	4175936.44	1.19265
574247.00	4175936.44	1.36491	574267.00	4175936.44	1.55352
574187.00	4175956.44	0.78057	574207.00	4175956.44	0.88773
574227.00	4175956.44	1.00089	574247.00	4175956.44	1.11404
574267.00	4175956.44	1.22414	574167.00	4175976.44	0.61395
574187.00	4175976.44	0.68813	574207.00	4175976.44	0.76593
574227.00	4175976.44	0.84451	574247.00	4175976.44	0.91986
574267.00	4175976.44	0.98870	574287.00	4175976.44	1.05473
574167.00	4175996.44	0.55013	574187.00	4175996.44	0.60598
574207.00	4175996.44	0.66247	574227.00	4175996.44	0.71731
574247.00	4175996.44	0.76821	574267.00	4175996.44	0.81317
574287.00	4175996.44	0.85214	574307.00	4175996.44	0.89908
574147.00	4176016.44	0.45061	574167.00	4176016.44	0.49206
574187.00	4176016.44	0.53405	574207.00	4176016.44	0.57516
574227.00	4176016.44	0.61371	574247.00	4176016.44	0.64852
574267.00	4176016.44	0.67840	574287.00	4176016.44	0.70339
574307.00	4176016.44	0.72746	574147.00	4176036.44	0.40805
574167.00	4176036.44	0.44010	574187.00	4176036.44	0.47159
574207.00	4176036.44	0.50162	574227.00	4176036.44	0.52900
574247.00	4176036.44	0.55301	574267.00	4176036.44	0.57322
574287.00	4176036.44	0.58993	574307.00	4176036.44	0.60382

574147.00	4176056.44	0.36927	574167.00	4176056.44	0.39391
574187.00	4176056.44	0.41748	574207.00	4176056.44	0.43959
574227.00	4176056.44	0.45919	574247.00	4176056.44	0.47595

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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
574267.00	4176056.44	0.48991	574287.00	4176056.44	0.50140
574307.00	4176056.44	0.51018	574327.00	4176056.44	0.51380
574147.00	4176076.44	0.33424	574167.00	4176076.44	0.35316
574187.00	4176076.44	0.37073	574207.00	4176076.44	0.38673
574227.00	4176076.44	0.40046	574247.00	4176076.44	0.41301
574267.00	4176076.44	0.42332	574287.00	4176076.44	0.43105
574307.00	4176076.44	0.43620	574327.00	4176076.44	0.43876
574147.00	4176096.44	0.30282	574167.00	4176096.44	0.31735
574187.00	4176096.44	0.33055	574207.00	4176096.44	0.34222
574227.00	4176096.44	0.35190	574247.00	4176096.44	0.36085
574267.00	4176096.44	0.36827	574287.00	4176096.44	0.37392
574307.00	4176096.44	0.37780	574327.00	4176096.44	0.38022
574167.00	4176116.44	0.28594	574187.00	4176116.44	0.29595
574207.00	4176116.44	0.30460	574227.00	4176116.44	0.31142
574247.00	4176116.44	0.31732	574267.00	4176116.44	0.32251
574287.00	4176116.44	0.32706	574307.00	4176116.44	0.33082
574327.00	4176116.44	0.33360	574187.00	4176136.44	0.26600
574207.00	4176136.44	0.27241	574227.00	4176136.44	0.27744
574247.00	4176136.44	0.28154	574267.00	4176136.44	0.28524
574287.00	4176136.44	0.28846	574307.00	4176136.44	0.29092
574327.00	4176136.44	0.29274	574227.00	4176156.44	0.24852
574247.00	4176156.44	0.25149	574267.00	4176156.44	0.25410
574287.00	4176156.44	0.25631	574307.00	4176156.44	0.25794
574327.00	4176156.44	0.25915	574388.70	4175990.54	1.02420
574468.70	4176010.54	0.78593	574448.70	4176030.54	0.66011
574468.70	4176030.54	0.65454	574348.70	4176050.54	0.56953
574368.70	4176050.54	0.57517	574388.70	4176050.54	0.57750
574408.70	4176050.54	0.56577	574428.70	4176050.54	0.55535
574448.70	4176050.54	0.54326	574468.70	4176050.54	0.53564
574348.70	4176070.54	0.47292	574368.70	4176070.54	0.47584
574388.70	4176070.54	0.47426	574408.70	4176070.54	0.47098
574428.70	4176070.54	0.46669	574448.70	4176070.54	0.46076
574468.70	4176070.54	0.45496	574348.70	4176090.54	0.40182
574368.70	4176090.54	0.40197	574388.70	4176090.54	0.40202
574408.70	4176090.54	0.40192	574428.70	4176090.54	0.40055
574448.70	4176090.54	0.39686	574468.70	4176090.54	0.39293
574348.70	4176110.54	0.35038	574368.70	4176110.54	0.35116

574388.70	4176110.54	0.35020	574408.70	4176110.54	0.34887
574428.70	4176110.54	0.34759	574448.70	4176110.54	0.34499
574468.70	4176110.54	0.34221	574348.70	4176130.54	0.30658

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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
574368.70	4176130.54	0.30779	574388.70	4176130.54	0.30700
574408.70	4176130.54	0.30558	574428.70	4176130.54	0.30437
574448.70	4176130.54	0.30277	574468.70	4176130.54	0.30045
574348.70	4176150.54	0.26995	574368.70	4176150.54	0.27126
574388.70	4176150.54	0.27096	574408.70	4176150.54	0.26982
574428.70	4176150.54	0.26872	574448.70	4176150.54	0.26785
574468.70	4176150.54	0.26565	574348.70	4176170.54	0.23989
574368.70	4176170.54	0.24066	574388.70	4176170.54	0.24068
574408.70	4176170.54	0.24017	574428.70	4176170.54	0.23940
574448.70	4176170.54	0.23834	574468.70	4176170.54	0.23661
574348.70	4176190.54	0.21468	574368.70	4176190.54	0.21516
574388.70	4176190.54	0.21514	574408.70	4176190.54	0.21476
574428.70	4176190.54	0.21412	574448.70	4176190.54	0.21325
574468.70	4176190.54	0.21187	574019.48	4175948.62	0.26764
574030.49	4175955.43	0.28314	574039.13	4175958.57	0.29663
574052.50	4175966.17	0.31745	574032.72	4175990.01	0.27293
573996.34	4175970.59	0.23102	574009.29	4175976.14	0.24587
573963.97	4175951.17	0.19773	573938.39	4175932.98	0.17487
573930.06	4175928.97	0.16782	574704.60	4175732.63	1.15243
574706.63	4175725.04	1.13030	574713.21	4175712.37	1.07371
574715.24	4175697.18	1.03424	574722.84	4175680.46	0.96091
574724.36	4175665.77	0.91770	574659.52	4175663.74	1.21184
574668.64	4175665.26	1.17074	574662.05	4175651.08	1.13125
574673.20	4175651.08	1.08051	574645.84	4175643.48	1.16062
574625.07	4175638.41	1.21655	574612.91	4175630.31	1.20014
574601.77	4175627.27	1.21410	574587.01	4175622.80	1.21963
574564.31	4175610.72	1.14722	574548.58	4175608.89	1.15020
574539.79	4175606.69	1.13337	574483.78	4176034.14	0.61000
574489.73	4176011.83	0.75177	574128.78	4175596.18	0.26988
574147.97	4175608.31	0.30313	574167.97	4175618.02	0.34264
574128.78	4175616.18	0.29980	574144.33	4175624.27	0.33318
574160.69	4175632.36	0.37308	574192.27	4175647.46	0.47020
574197.93	4175635.73	0.42836	574208.44	4175616.32	0.35932
574195.10	4175607.83	0.32829	574128.78	4175596.18	0.24907
574147.97	4175608.31	0.28128	574167.97	4175618.02	0.31453
574128.78	4175616.18	0.28049	574144.33	4175624.27	0.30940
574160.69	4175632.36	0.34319	574192.27	4175647.46	0.42395

574197.93	4175635.73	0.38575	574208.44	4175616.32	0.32285
574195.10	4175607.83	0.29756	574394.80	4175784.17	29.18223
574414.80	4175784.17	19.41232	574434.80	4175784.17	13.44963

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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
574379.33	4175803.49	34.37189	574471.52	4175796.93	7.60211
574394.80	4175804.17	25.86204	574414.80	4175804.17	17.65045
574434.80	4175804.17	12.37048	574454.80	4175804.17	9.18586
574466.41	4175815.47	7.31005	574374.80	4175824.17	26.45162
574394.80	4175824.17	18.93143	574414.80	4175824.17	13.71675
574434.80	4175824.17	10.16392	574454.80	4175824.17	7.81277
574374.80	4175844.17	15.03488	574394.80	4175844.17	12.01183
574414.80	4175844.17	9.58221	574434.80	4175844.17	7.66746
574454.80	4175844.17	6.19091	574414.80	4175864.17	6.42197
574434.80	4175864.17	5.49024	574454.80	4175864.17	4.67702
574394.80	4175784.17	22.11185	574414.80	4175784.17	16.19168
574434.80	4175784.17	11.84916	574379.33	4175803.49	23.36024
574471.52	4175796.93	7.07257	574394.80	4175804.17	20.09930
574414.80	4175804.17	14.84370	574434.80	4175804.17	10.91696
574454.80	4175804.17	8.38490	574466.41	4175815.47	6.77323
574374.80	4175824.17	18.24211	574394.80	4175824.17	14.97844
574414.80	4175824.17	11.66509	574434.80	4175824.17	9.03955
574454.80	4175824.17	7.15697	574374.80	4175844.17	11.28103
574394.80	4175844.17	9.83731	574414.80	4175844.17	8.30707
574434.80	4175844.17	6.89786	574454.80	4175844.17	5.70482
574414.80	4175864.17	5.70374	574434.80	4175864.17	5.00204
574454.80	4175864.17	4.33867	574207.00	4175936.44	1.00276
574227.00	4175936.44	1.14360	574247.00	4175936.44	1.27458
574267.00	4175936.44	1.43796	574187.00	4175956.44	0.76903
574207.00	4175956.44	0.86389	574227.00	4175956.44	0.95796
574247.00	4175956.44	1.04113	574267.00	4175956.44	1.12352
574167.00	4175976.44	0.61027	574187.00	4175976.44	0.67669
574207.00	4175976.44	0.74300	574227.00	4175976.44	0.80492
574247.00	4175976.44	0.85876	574267.00	4175976.44	0.90592
574287.00	4175976.44	0.95535	574167.00	4175996.44	0.54599
574187.00	4175996.44	0.59380	574207.00	4175996.44	0.63993
574227.00	4175996.44	0.68051	574247.00	4175996.44	0.71595
574267.00	4175996.44	0.74575	574287.00	4175996.44	0.77265
574307.00	4175996.44	0.81054	574147.00	4176016.44	0.45100
574167.00	4176016.44	0.48756	574187.00	4176016.44	0.52200
574207.00	4176016.44	0.55324	574227.00	4176016.44	0.58001
574247.00	4176016.44	0.60332	574267.00	4176016.44	0.62258

574287.00	4176016.44	0.63956	574307.00	4176016.44	0.65894
574147.00	4176036.44	0.40671	574167.00	4176036.44	0.43311
574187.00	4176036.44	0.45765	574207.00	4176036.44	0.48028

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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
574227.00	4176036.44	0.49846	574247.00	4176036.44	0.51369
574267.00	4176036.44	0.52650	574287.00	4176036.44	0.53804
574307.00	4176036.44	0.54901	574147.00	4176056.44	0.36581
574167.00	4176056.44	0.38428	574187.00	4176056.44	0.40166
574207.00	4176056.44	0.41876	574227.00	4176056.44	0.43135
574247.00	4176056.44	0.44160	574267.00	4176056.44	0.45048
574287.00	4176056.44	0.45868	574307.00	4176056.44	0.46566
574327.00	4176056.44	0.46874	574147.00	4176076.44	0.32887
574167.00	4176076.44	0.34232	574187.00	4176076.44	0.35423
574207.00	4176076.44	0.36507	574227.00	4176076.44	0.37341
574247.00	4176076.44	0.38274	574267.00	4176076.44	0.39002
574287.00	4176076.44	0.39547	574307.00	4176076.44	0.39947
574327.00	4176076.44	0.40191	574147.00	4176096.44	0.29633
574167.00	4176096.44	0.30615	574187.00	4176096.44	0.31457
574207.00	4176096.44	0.32175	574227.00	4176096.44	0.32696
574247.00	4176096.44	0.33375	574267.00	4176096.44	0.33942
574287.00	4176096.44	0.34387	574307.00	4176096.44	0.34722
574327.00	4176096.44	0.34974	574167.00	4176116.44	0.27490
574187.00	4176116.44	0.28106	574207.00	4176116.44	0.28608
574227.00	4176116.44	0.28904	574247.00	4176116.44	0.29281
574267.00	4176116.44	0.29708	574287.00	4176116.44	0.30136
574307.00	4176116.44	0.30516	574327.00	4176116.44	0.30807
574187.00	4176136.44	0.25224	574207.00	4176136.44	0.25556
574227.00	4176136.44	0.25773	574247.00	4176136.44	0.26007
574267.00	4176136.44	0.26318	574287.00	4176136.44	0.26637
574307.00	4176136.44	0.26902	574327.00	4176136.44	0.27112
574227.00	4176156.44	0.23112	574247.00	4176156.44	0.23276
574267.00	4176156.44	0.23496	574287.00	4176156.44	0.23722
574307.00	4176156.44	0.23912	574327.00	4176156.44	0.24066
574388.70	4175990.54	0.92668	574468.70	4176010.54	0.74325
574448.70	4176030.54	0.61195	574468.70	4176030.54	0.61415
574348.70	4176050.54	0.53387	574368.70	4176050.54	0.54063
574388.70	4176050.54	0.52609	574408.70	4176050.54	0.51974
574428.70	4176050.54	0.51385	574448.70	4176050.54	0.50633
574468.70	4176050.54	0.50208	574348.70	4176070.54	0.43333
574368.70	4176070.54	0.43650	574388.70	4176070.54	0.43617
574408.70	4176070.54	0.43460	574428.70	4176070.54	0.43257

574448.70	4176070.54	0.42951	574468.70	4176070.54	0.42666
574348.70	4176090.54	0.36987	574368.70	4176090.54	0.37040
574388.70	4176090.54	0.37087	574408.70	4176090.54	0.37148

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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
574428.70	4176090.54	0.37142	574448.70	4176090.54	0.36977
574468.70	4176090.54	0.36817	574348.70	4176110.54	0.32356
574368.70	4176110.54	0.32448	574388.70	4176110.54	0.32381
574408.70	4176110.54	0.32291	574428.70	4176110.54	0.32246
574448.70	4176110.54	0.32129	574468.70	4176110.54	0.32036
574348.70	4176130.54	0.28401	574368.70	4176130.54	0.28519
574388.70	4176130.54	0.28450	574408.70	4176130.54	0.28327
574428.70	4176130.54	0.28254	574448.70	4176130.54	0.28190
574468.70	4176130.54	0.28099	574348.70	4176150.54	0.25081
574368.70	4176150.54	0.25203	574388.70	4176150.54	0.25166
574408.70	4176150.54	0.25052	574428.70	4176150.54	0.24964
574448.70	4176150.54	0.24938	574468.70	4176150.54	0.24824
574348.70	4176170.54	0.22347	574368.70	4176170.54	0.22418
574388.70	4176170.54	0.22403	574408.70	4176170.54	0.22337
574428.70	4176170.54	0.22263	574448.70	4176170.54	0.22194
574468.70	4176170.54	0.22096	574348.70	4176190.54	0.20049
574368.70	4176190.54	0.20091	574388.70	4176190.54	0.20069
574408.70	4176190.54	0.20008	574428.70	4176190.54	0.19934
574448.70	4176190.54	0.19864	574468.70	4176190.54	0.19777
574247.00	4176096.44	0.31774	574227.00	4176116.44	0.27586
574247.00	4176116.44	0.27925	574267.00	4176116.44	0.28339
574287.00	4176116.44	0.28775	574247.00	4176136.44	0.24853
574267.00	4176136.44	0.25157	574207.00	4175936.44	0.92784
574227.00	4175936.44	1.05312	574247.00	4175936.44	1.16516
574267.00	4175936.44	1.31813	574187.00	4175956.44	0.71896
574207.00	4175956.44	0.80500	574227.00	4175956.44	0.88939
574247.00	4175956.44	0.96155	574267.00	4175956.44	1.03557
574167.00	4175976.44	0.57519	574187.00	4175976.44	0.63597
574207.00	4175976.44	0.69638	574227.00	4175976.44	0.75187
574247.00	4175976.44	0.79924	574167.00	4175996.44	0.51697
574187.00	4175996.44	0.56057	574207.00	4175996.44	0.60267
574227.00	4175996.44	0.63881	574247.00	4175996.44	0.67032
574167.00	4176016.44	0.46386	574187.00	4176016.44	0.49516
574207.00	4176016.44	0.52319	574227.00	4176016.44	0.54682
574207.00	4176036.44	0.45571	574496.48	4175809.26	5.30225
574494.17	4175823.52	4.99270	574514.17	4175823.52	4.07945
574534.17	4175823.52	3.38718	574554.17	4175823.52	2.84819

574494.17	4175843.52	4.23416	574514.17	4175843.52	3.53936
574534.17	4175843.52	2.98993	574554.17	4175843.52	2.55172
574574.17	4175843.52	2.20886	574594.17	4175843.52	1.91895

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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
574474.17	4175863.52	4.03832	574494.17	4175863.52	3.44636
574514.17	4175863.52	2.96091	574534.17	4175863.52	2.55929
574554.17	4175863.52	2.22756	574594.17	4175863.52	1.72353
574614.17	4175863.52	1.52578	574634.17	4175863.52	1.35866
574654.17	4175863.52	1.21610	574474.17	4175883.52	3.10193
574494.17	4175883.52	2.74120	574514.17	4175883.52	2.42147
574534.17	4175883.52	2.14245	574554.17	4175883.52	1.90262
574594.17	4175883.52	1.51782	574614.17	4175883.52	1.35906
574634.17	4175883.52	1.22286	574654.17	4175883.52	1.10530
574463.94	4175912.20	2.19687	574514.17	4175903.52	1.95458
574534.17	4175903.52	1.76749	574554.17	4175903.52	1.59988
574574.17	4175903.52	1.45170	574594.17	4175903.52	1.31584
574614.17	4175903.52	1.19251	574634.17	4175903.52	1.08513
574654.17	4175903.52	0.99138	574594.17	4175843.52	1.86407
574594.17	4175863.52	1.67352	574554.17	4175883.52	1.83441
574463.94	4175912.20	2.07667	574447.89	4175959.39	1.17978
574452.26	4175941.52	1.45753	574054.52	4175526.08	0.15613
574071.42	4175518.40	0.15662	574071.03	4175551.04	0.18164
574063.74	4175566.02	0.18935	574079.87	4175575.23	0.20771
574099.07	4175584.45	0.23140	574105.21	4175576.77	0.22718
574092.54	4175529.15	0.17220	574054.52	4175526.08	0.15545
574071.42	4175518.40	0.15584	574071.03	4175551.04	0.18057
574063.74	4175566.02	0.18808	574079.87	4175575.23	0.20652
574099.07	4175584.45	0.22962	574105.21	4175576.77	0.22547
574092.54	4175529.15	0.17105			

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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 ,

*** 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
574081.99	4175715.56	2.18570	574101.99	4175715.56	2.73152
574021.99	4175735.56	0.94588	574041.99	4175735.56	1.15397
574061.99	4175735.56	1.40862	574081.99	4175735.56	1.71460
574101.99	4175735.56	2.08218	574121.99	4175735.56	2.52716
573981.99	4175755.56	0.57911	574001.99	4175755.56	0.68906
574021.99	4175755.56	0.82158	574061.99	4175755.56	1.16048
574081.99	4175755.56	1.37160	574106.12	4175751.70	1.74943
574121.99	4175755.56	1.91180	573961.99	4175775.56	0.45160
573981.99	4175775.56	0.52670	574001.99	4175775.56	0.61495
574041.99	4175775.56	0.83257	574061.99	4175775.56	0.96468
574081.99	4175775.56	1.12413	574101.99	4175775.56	1.31527
574121.99	4175775.56	1.52425	574141.99	4175775.56	1.76714
573941.99	4175795.56	0.36212	573961.99	4175795.56	0.41598
573981.99	4175795.56	0.47827	574021.99	4175795.56	0.62931
574041.99	4175795.56	0.72172	574061.99	4175795.56	0.82682
574081.99	4175795.56	0.95009	574101.99	4175795.56	1.08656
574141.99	4175795.56	1.42100	574161.99	4175795.56	1.63494
573901.99	4175815.56	0.26331	573921.99	4175815.56	0.29736
573941.99	4175815.56	0.33672	573961.99	4175815.56	0.38235
573981.99	4175815.56	0.43452	574001.99	4175815.56	0.49303
574021.99	4175815.56	0.55901	574041.99	4175815.56	0.63362
574061.99	4175815.56	0.71700	574081.99	4175815.56	0.81278
574101.99	4175815.56	0.91516	574121.99	4175815.56	1.03293
574141.99	4175815.56	1.16507	574161.99	4175815.56	1.30867
574181.99	4175815.56	1.46658	573881.99	4175835.56	0.22270
573901.99	4175835.56	0.24930	573921.99	4175835.56	0.27934
573941.99	4175835.56	0.31346	573961.99	4175835.56	0.35202
573981.99	4175835.56	0.39599	574001.99	4175835.56	0.44562
574041.99	4175835.56	0.56185	574061.99	4175835.56	0.62754
574081.99	4175835.56	0.70225	574101.99	4175835.56	0.78275
574121.99	4175835.56	0.87112	574141.99	4175835.56	0.96994
573861.99	4175855.56	0.19105	573879.60	4175863.12	0.20555
573921.99	4175855.56	0.26250	573941.99	4175855.56	0.29223
573961.99	4175855.56	0.32527	573981.99	4175855.56	0.36264

574001.99	4175855.56	0.40415	574021.99	4175855.56	0.44979
574041.99	4175855.56	0.49960	574081.99	4175855.56	0.61468
574101.99	4175855.56	0.67781	574121.99	4175855.56	0.74568
574141.99	4175855.56	0.82185	573861.99	4175875.56	0.18275
573881.99	4175875.56	0.20166	573901.99	4175875.56	0.22283
573921.99	4175875.56	0.24641	573961.99	4175875.56	0.30113

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION   VALUES 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 ,

*** 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
573981.99	4175875.56	0.33304	574001.99	4175875.56	0.36788
574021.99	4175875.56	0.40580	574041.99	4175875.56	0.44699
574061.99	4175875.56	0.49223	574121.99	4175875.56	0.64531
574141.99	4175875.56	0.70443	573901.99	4175895.56	0.21046
573921.99	4175895.56	0.23120	573941.99	4175895.56	0.25399
573981.99	4175895.56	0.30659	574001.99	4175895.56	0.33592
574021.99	4175895.56	0.36767	574041.99	4175895.56	0.40199
574061.99	4175895.56	0.43887	574081.99	4175895.56	0.47855
574101.99	4175895.56	0.52038	573921.99	4175915.56	0.21687
573941.99	4175915.56	0.23666	573961.99	4175915.56	0.25850
573981.99	4175915.56	0.28196	574021.99	4175915.56	0.33423
574041.99	4175915.56	0.36293	574061.99	4175915.56	0.39293
574081.99	4175915.56	0.42460	573981.99	4175935.56	0.25957
574001.99	4175935.56	0.28128	574021.99	4175935.56	0.30435
574041.99	4175935.56	0.32848	574061.99	4175935.56	0.35347
574081.99	4175935.56	0.37923	574117.40	4175909.67	0.50445
574107.89	4175931.08	0.42681	574128.78	4175596.18	10.20274
574147.97	4175608.31	11.72022	574167.97	4175618.02	11.97604
574128.78	4175616.18	19.69181	574144.33	4175624.27	20.10177
574160.69	4175632.36	20.01774	574192.27	4175647.46	19.31040
574197.93	4175635.73	12.99627	574208.44	4175616.32	7.70626
574195.10	4175607.83	7.29832	574179.73	4175598.93	6.88953
574219.36	4175531.40	1.84572	574233.11	4175538.27	1.98074
574225.02	4175516.44	1.48583	574241.60	4175524.93	1.62950
574203.99	4175518.86	1.56655	574191.46	4175513.61	1.45518
574179.73	4175506.73	1.30823	574184.58	4175494.20	1.09395
574217.74	4175502.28	1.23382	574213.30	4175483.28	0.96365
574223.41	4175487.32	1.01680	574223.41	4175460.63	0.74026
574211.27	4175442.43	0.59858	574203.19	4175462.25	0.74048
574239.18	4175459.82	0.74101	574233.11	4175475.19	0.88049
574252.52	4175478.02	0.91167	574256.97	4175463.87	0.77936
574267.08	4175472.36	0.85445	574138.48	4175484.49	0.89266
574151.02	4175489.34	0.97980	574134.84	4175449.71	0.57341
574140.10	4175442.03	0.53248	574156.28	4175461.03	0.68132

574158.30	4175451.33	0.60999	574167.19	4175437.98	0.53483
574112.24	4175466.61	0.66492	574117.28	4175451.49	0.56357
574125.12	4175436.94	0.48971	574087.62	4175452.61	0.52975
574099.93	4175459.33	0.59109	574099.93	4175424.63	0.40979
574125.12	4175415.67	0.39669	574326.80	4175877.59	1.25140
574331.19	4175864.46	1.48802	574366.80	4175877.59	1.23256

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION   VALUES 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 ,

*** 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	
574380.37	4175881.02	1.16451	574402.94	4175886.17	1.05840	
574326.80	4175897.59	0.98178	574346.80	4175897.59	0.98318	
574366.80	4175897.59	0.97539	574406.80	4175897.59	0.92829	
574426.80	4175897.59	0.88989	574346.80	4175917.59	0.79844	
574366.80	4175917.59	0.79286	574386.80	4175917.59	0.78063	
574406.80	4175917.59	0.76071	574426.80	4175917.59	0.73335	
574438.43	4175900.08	0.84594	574346.80	4175937.59	0.66367	
574366.80	4175937.59	0.65796	574386.80	4175937.59	0.64923	
574426.80	4175937.59	0.61509	574345.36	4175973.37	0.50818	
574346.80	4175957.59	0.56333	574386.80	4175957.59	0.54801	
574406.80	4175957.59	0.53717	574366.80	4175977.59	0.48125	
574406.80	4175977.59	0.47086	574292.21	4175852.68	1.61138	
574394.80	4175784.17	7.10365	574414.80	4175784.17	5.45254	
574434.80	4175784.17	4.17391	574379.33	4175803.49	4.39385	MER LOCATION
574471.52	4175796.93	2.39529	574394.80	4175804.17	4.06781	
574414.80	4175804.17	3.52105	574434.80	4175804.17	2.97664	
574454.80	4175804.17	2.52475	574466.41	4175815.47	2.00181	
574374.80	4175824.17	2.77595	574394.80	4175824.17	2.63596	
574414.80	4175824.17	2.40516	574434.80	4175824.17	2.15468	
574454.80	4175824.17	1.92263	574374.80	4175844.17	1.94513	
574394.80	4175844.17	1.85913	574414.80	4175844.17	1.74464	
574434.80	4175844.17	1.61670	574454.80	4175844.17	1.48592	
574414.80	4175864.17	1.33419	574434.80	4175864.17	1.25512	
574454.80	4175864.17	1.17420	574309.56	4175859.05	1.52255	
574306.65	4175876.55	1.22663	574496.48	4175809.26	1.73355	
574494.17	4175823.52	1.53098	574514.17	4175823.52	1.35988	
574534.17	4175823.52	1.21214	574554.17	4175823.52	1.08446	
574494.17	4175843.52	1.25000	574514.17	4175843.52	1.13669	
574534.17	4175843.52	1.03327	574554.17	4175843.52	0.94029	
574574.17	4175843.52	0.85957	574594.17	4175843.52	0.78542	
574474.17	4175863.52	1.10343	574494.17	4175863.52	1.02325	
574514.17	4175863.52	0.94754	574534.17	4175863.52	0.87624	
574554.17	4175863.52	0.81025	574594.17	4175863.52	0.69468	
574614.17	4175863.52	0.64316	574634.17	4175863.52	0.59644	

574654.17	4175863.52	0.55401	574474.17	4175883.52	0.90150
574494.17	4175883.52	0.84756	574514.17	4175883.52	0.79506
574534.17	4175883.52	0.74468	574554.17	4175883.52	0.69734
574594.17	4175883.52	0.61127	574614.17	4175883.52	0.57112
574634.17	4175883.52	0.53430	574654.17	4175883.52	0.50048
574463.94	4175912.20	0.71201	574514.17	4175903.52	0.67360

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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 ,

*** 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
574534.17	4175903.52	0.63674	574554.17	4175903.52	0.60181
574574.17	4175903.52	0.56909	574594.17	4175903.52	0.53688
574614.17	4175903.52	0.50473	574634.17	4175903.52	0.47558
574654.17	4175903.52	0.45023	574474.17	4175923.52	0.63150
574494.17	4175923.52	0.60293	574514.17	4175923.52	0.57496
574530.76	4175928.48	0.53213	574574.17	4175923.52	0.49737
574594.17	4175923.52	0.47271	574614.17	4175923.52	0.44819
574634.17	4175923.52	0.42512	574654.17	4175923.52	0.40461
574474.17	4175943.52	0.54295	574494.17	4175943.52	0.52472
574514.17	4175943.52	0.50530	574534.17	4175943.52	0.48384
574554.17	4175943.52	0.46043	574574.17	4175943.52	0.43635
574634.17	4175943.52	0.37895	574654.17	4175943.52	0.36282
574594.17	4175963.52	0.36265	574614.17	4175963.52	0.34830
574634.17	4175963.52	0.33446	574614.17	4175983.52	0.32480
574634.17	4175983.52	0.30990	574447.89	4175959.39	0.50176
574452.26	4175941.52	0.57179	574571.49	4175959.76	0.39662
574207.00	4175936.44	0.55878	574227.00	4175936.44	0.58632
574247.00	4175936.44	0.60910	574267.00	4175936.44	0.64182
574187.00	4175956.44	0.46083	574207.00	4175956.44	0.48331
574227.00	4175956.44	0.50438	574247.00	4175956.44	0.52182
574267.00	4175956.44	0.53951	574167.00	4175976.44	0.38588
574187.00	4175976.44	0.40417	574207.00	4175976.44	0.42173
574227.00	4175976.44	0.43771	574247.00	4175976.44	0.45142
574267.00	4175976.44	0.46339	574287.00	4175976.44	0.47585
574167.00	4175996.44	0.34262	574187.00	4175996.44	0.35700
574207.00	4175996.44	0.37085	574227.00	4175996.44	0.38302
574247.00	4175996.44	0.39390	574267.00	4175996.44	0.40300
574287.00	4175996.44	0.41068	574307.00	4175996.44	0.42150
574147.00	4176016.44	0.29392	574167.00	4176016.44	0.30630
574187.00	4176016.44	0.31781	574207.00	4176016.44	0.32843
574227.00	4176016.44	0.33785	574247.00	4176016.44	0.34637
574267.00	4176016.44	0.35337	574287.00	4176016.44	0.35899
574307.00	4176016.44	0.36448	574147.00	4176036.44	0.26456
574167.00	4176036.44	0.27428	574187.00	4176036.44	0.28357

574207.00	4176036.44	0.29256	574227.00	4176036.44	0.30012
574247.00	4176036.44	0.30673	574267.00	4176036.44	0.31222
574287.00	4176036.44	0.31661	574307.00	4176036.44	0.31986
574147.00	4176056.44	0.23895	574167.00	4176056.44	0.24650
574187.00	4176056.44	0.25404	574207.00	4176056.44	0.26189
574227.00	4176056.44	0.26808	574247.00	4176056.44	0.27335

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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 ,

*** 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
574267.00	4176056.44	0.27778	574287.00	4176056.44	0.28132
574307.00	4176056.44	0.28357	574327.00	4176056.44	0.28342
574147.00	4176076.44	0.21665	574167.00	4176076.44	0.22292
574187.00	4176076.44	0.22892	574207.00	4176076.44	0.23475
574227.00	4176076.44	0.23969	574247.00	4176076.44	0.24492
574267.00	4176076.44	0.24895	574287.00	4176076.44	0.25162
574307.00	4176076.44	0.25299	574327.00	4176076.44	0.25304
574147.00	4176096.44	0.19739	574167.00	4176096.44	0.20263
574187.00	4176096.44	0.20758	574207.00	4176096.44	0.21220
574227.00	4176096.44	0.21604	574247.00	4176096.44	0.22032
574267.00	4176096.44	0.22377	574287.00	4176096.44	0.22617
574307.00	4176096.44	0.22750	574327.00	4176096.44	0.22793
574167.00	4176116.44	0.18502	574187.00	4176116.44	0.18924
574207.00	4176116.44	0.19307	574227.00	4176116.44	0.19599
574247.00	4176116.44	0.19901	574267.00	4176116.44	0.20186
574287.00	4176116.44	0.20426	574307.00	4176116.44	0.20600
574327.00	4176116.44	0.20692	574187.00	4176136.44	0.17320
574207.00	4176136.44	0.17632	574227.00	4176136.44	0.17885
574247.00	4176136.44	0.18120	574267.00	4176136.44	0.18351
574287.00	4176136.44	0.18547	574307.00	4176136.44	0.18678
574327.00	4176136.44	0.18751	574227.00	4176156.44	0.16386
574247.00	4176156.44	0.16582	574267.00	4176156.44	0.16768
574287.00	4176156.44	0.16923	574307.00	4176156.44	0.17026
574327.00	4176156.44	0.17085	574388.70	4175990.54	0.43597
574468.70	4176010.54	0.35631	574448.70	4176030.54	0.31967
574468.70	4176030.54	0.31522	574348.70	4176050.54	0.30313
574368.70	4176050.54	0.30293	574388.70	4176050.54	0.29961
574408.70	4176050.54	0.29311	574428.70	4176050.54	0.28729
574448.70	4176050.54	0.28101	574468.70	4176050.54	0.27630
574348.70	4176070.54	0.26547	574368.70	4176070.54	0.26468
574388.70	4176070.54	0.26208	574408.70	4176070.54	0.25885
574428.70	4176070.54	0.25529	574448.70	4176070.54	0.25122
574468.70	4176070.54	0.24729	574348.70	4176090.54	0.23625
574368.70	4176090.54	0.23497	574388.70	4176090.54	0.23347

574408.70	4176090.54	0.23179	574428.70	4176090.54	0.22959
574448.70	4176090.54	0.22654	574468.70	4176090.54	0.22345
574348.70	4176110.54	0.21378	574368.70	4176110.54	0.21307
574388.70	4176110.54	0.21147	574408.70	4176110.54	0.20961
574428.70	4176110.54	0.20772	574448.70	4176110.54	0.20529
574468.70	4176110.54	0.20281	574348.70	4176130.54	0.19363

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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 ,

*** 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
574368.70	4176130.54	0.19342	574388.70	4176130.54	0.19214
574408.70	4176130.54	0.19048	574428.70	4176130.54	0.18886
574448.70	4176130.54	0.18703	574468.70	4176130.54	0.18489
574348.70	4176150.54	0.17595	574368.70	4176150.54	0.17605
574388.70	4176150.54	0.17521	574408.70	4176150.54	0.17388
574428.70	4176150.54	0.17249	574448.70	4176150.54	0.17116
574468.70	4176150.54	0.16922	574348.70	4176170.54	0.16081
574368.70	4176170.54	0.16084	574388.70	4176170.54	0.16034
574408.70	4176170.54	0.15947	574428.70	4176170.54	0.15840
574448.70	4176170.54	0.15714	574468.70	4176170.54	0.15553
574348.70	4176190.54	0.14763	574368.70	4176190.54	0.14765
574388.70	4176190.54	0.14727	574408.70	4176190.54	0.14661
574428.70	4176190.54	0.14574	574448.70	4176190.54	0.14470
574468.70	4176190.54	0.14338	574019.48	4175948.62	0.28365
574030.49	4175955.43	0.28610	574039.13	4175958.57	0.29069
574052.50	4175966.17	0.29375	574032.72	4175990.01	0.24699
573996.34	4175970.59	0.23755	574009.29	4175976.14	0.24277
573963.97	4175951.17	0.22719	573938.39	4175932.98	0.21925
573930.06	4175928.97	0.21482	574704.60	4175732.63	0.66900
574706.63	4175725.04	0.66851	574713.21	4175712.37	0.65587
574715.24	4175697.18	0.65508	574722.84	4175680.46	0.63490
574724.36	4175665.77	0.62880	574659.52	4175663.74	0.84423
574668.64	4175665.26	0.80907	574662.05	4175651.08	0.82212
574673.20	4175651.08	0.78077	574645.84	4175643.48	0.87692
574625.07	4175638.41	0.95754	574612.91	4175630.31	0.99403
574601.77	4175627.27	1.03813	574587.01	4175622.80	1.09622
574564.31	4175610.72	1.15927	574548.58	4175608.89	1.23144
574539.79	4175606.69	1.26529	574483.78	4176034.14	0.29961
574489.73	4176011.83	0.34189	574128.78	4175596.18	7.94661
574147.97	4175608.31	9.19500	574167.97	4175618.02	9.54589
574128.78	4175616.18	13.73465	574144.33	4175624.27	14.20118
574160.69	4175632.36	14.29073	574192.27	4175647.46	14.13625
574197.93	4175635.73	10.40623	574208.44	4175616.32	6.72460
574195.10	4175607.83	6.36021	574128.78	4175596.18	5.97348

574147.97	4175608.31	6.96711	574167.97	4175618.02	7.36211
574128.78	4175616.18	9.04428	574144.33	4175624.27	9.51797
574160.69	4175632.36	9.74294	574192.27	4175647.46	9.96637
574197.93	4175635.73	8.07372	574208.44	4175616.32	5.73272
574195.10	4175607.83	5.41628	574394.80	4175784.17	5.69612
574414.80	4175784.17	4.68906	574434.80	4175784.17	3.72115

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION   VALUES 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 ,

*** 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
574379.33	4175803.49	3.58607	574471.52	4175796.93	2.21387
574394.80	4175804.17	3.43651	574414.80	4175804.17	3.06352
574434.80	4175804.17	2.64012	574454.80	4175804.17	2.28915
574466.41	4175815.47	1.82526	574374.80	4175824.17	2.35240
574394.80	4175824.17	2.27147	574414.80	4175824.17	2.10545
574434.80	4175824.17	1.91132	574454.80	4175824.17	1.73111
574374.80	4175844.17	1.68067	574394.80	4175844.17	1.61661
574414.80	4175844.17	1.53326	574434.80	4175844.17	1.43623
574454.80	4175844.17	1.33327	574414.80	4175864.17	1.17830
574434.80	4175864.17	1.11607	574454.80	4175864.17	1.05141
574394.80	4175784.17	4.60452	574414.80	4175784.17	4.00938
574434.80	4175784.17	3.32429	574379.33	4175803.49	3.03260
574471.52	4175796.93	2.08060	574394.80	4175804.17	2.97152
574414.80	4175804.17	2.72050	574434.80	4175804.17	2.40213
574454.80	4175804.17	2.12569	574466.41	4175815.47	1.71525
574374.80	4175824.17	2.08446	574394.80	4175824.17	2.03754
574414.80	4175824.17	1.91772	574434.80	4175824.17	1.76641
574454.80	4175824.17	1.61987	574374.80	4175844.17	1.52877
574394.80	4175844.17	1.48249	574414.80	4175844.17	1.41941
574434.80	4175844.17	1.34167	574454.80	4175844.17	1.25554
574414.80	4175864.17	1.10123	574434.80	4175864.17	1.04998
574454.80	4175864.17	0.99484	574207.00	4175936.44	0.53477
574227.00	4175936.44	0.55445	574247.00	4175936.44	0.56801
574267.00	4175936.44	0.59501	574187.00	4175956.44	0.44611
574207.00	4175956.44	0.46220	574227.00	4175956.44	0.47659
574247.00	4175956.44	0.48652	574267.00	4175956.44	0.49800
574167.00	4175976.44	0.37796	574187.00	4175976.44	0.39087
574207.00	4175976.44	0.40288	574227.00	4175976.44	0.41301
574247.00	4175976.44	0.42061	574267.00	4175976.44	0.42690
574287.00	4175976.44	0.43529	574167.00	4175996.44	0.33527
574187.00	4175996.44	0.34482	574207.00	4175996.44	0.35383
574227.00	4175996.44	0.36083	574247.00	4175996.44	0.36671
574267.00	4175996.44	0.37106	574287.00	4175996.44	0.37468
574307.00	4175996.44	0.38366	574147.00	4176016.44	0.29109

574167.00	4176016.44	0.29955	574187.00	4176016.44	0.30679
574207.00	4176016.44	0.31299	574227.00	4176016.44	0.31787
574247.00	4176016.44	0.32215	574267.00	4176016.44	0.32513
574287.00	4176016.44	0.32723	574307.00	4176016.44	0.33040
574147.00	4176036.44	0.26154	574167.00	4176036.44	0.26755
574187.00	4176036.44	0.27305	574207.00	4176036.44	0.27843

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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 ,

*** 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
574227.00	4176036.44	0.28210	574247.00	4176036.44	0.28501
574267.00	4176036.44	0.28707	574287.00	4176036.44	0.28848
574307.00	4176036.44	0.28930	574147.00	4176056.44	0.23563
574167.00	4176056.44	0.23961	574187.00	4176056.44	0.24377
574207.00	4176056.44	0.24880	574227.00	4176056.44	0.25168
574247.00	4176056.44	0.25375	574267.00	4176056.44	0.25527
574287.00	4176056.44	0.25629	574307.00	4176056.44	0.25629
574327.00	4176056.44	0.25362	574147.00	4176076.44	0.21303
574167.00	4176076.44	0.21613	574187.00	4176076.44	0.21901
574207.00	4176076.44	0.22201	574227.00	4176076.44	0.22400
574247.00	4176076.44	0.22707	574267.00	4176076.44	0.22887
574287.00	4176076.44	0.22925	574307.00	4176076.44	0.22840
574327.00	4176076.44	0.22633	574147.00	4176096.44	0.19365
574167.00	4176096.44	0.19610	574187.00	4176096.44	0.19830
574207.00	4176096.44	0.20029	574227.00	4176096.44	0.20141
574247.00	4176096.44	0.20381	574267.00	4176096.44	0.20543
574287.00	4176096.44	0.20597	574307.00	4176096.44	0.20547
574327.00	4176096.44	0.20425	574167.00	4176116.44	0.17884
574187.00	4176116.44	0.18069	574207.00	4176116.44	0.18221
574227.00	4176116.44	0.18257	574247.00	4176116.44	0.18358
574267.00	4176116.44	0.18481	574287.00	4176116.44	0.18586
574307.00	4176116.44	0.18638	574327.00	4176116.44	0.18614
574187.00	4176136.44	0.16534	574207.00	4176136.44	0.16635
574227.00	4176136.44	0.16670	574247.00	4176136.44	0.16716
574267.00	4176136.44	0.16800	574287.00	4176136.44	0.16871
574307.00	4176136.44	0.16884	574327.00	4176136.44	0.16848
574227.00	4176156.44	0.15286	574247.00	4176156.44	0.15313
574267.00	4176156.44	0.15363	574287.00	4176156.44	0.15397
574307.00	4176156.44	0.15387	574327.00	4176156.44	0.15345
574388.70	4175990.54	0.38998	574468.70	4176010.54	0.34266
574448.70	4176030.54	0.28656	574468.70	4176030.54	0.28545
574348.70	4176050.54	0.27798	574368.70	4176050.54	0.28242
574388.70	4176050.54	0.27018	574408.70	4176050.54	0.26204
574428.70	4176050.54	0.25572	574448.70	4176050.54	0.24924

574468.70	4176050.54	0.24581	574348.70	4176070.54	0.23850
574368.70	4176070.54	0.23686	574388.70	4176070.54	0.23330
574408.70	4176070.54	0.22947	574428.70	4176070.54	0.22581
574448.70	4176070.54	0.22200	574468.70	4176070.54	0.21898
574348.70	4176090.54	0.21116	574368.70	4176090.54	0.20866
574388.70	4176090.54	0.20649	574408.70	4176090.54	0.20471

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION   VALUES 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 ,

*** 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
574428.70	4176090.54	0.20273	574448.70	4176090.54	0.19996
574468.70	4176090.54	0.19766	574348.70	4176110.54	0.19155
574368.70	4176110.54	0.18992	574388.70	4176110.54	0.18743
574408.70	4176110.54	0.18508	574428.70	4176110.54	0.18323
574448.70	4176110.54	0.18101	574468.70	4176110.54	0.17919
574348.70	4176130.54	0.17340	574368.70	4176130.54	0.17255
574388.70	4176130.54	0.17044	574408.70	4176130.54	0.16819
574428.70	4176130.54	0.16647	574448.70	4176130.54	0.16488
574468.70	4176130.54	0.16319	574348.70	4176150.54	0.15731
574368.70	4176150.54	0.15695	574388.70	4176150.54	0.15546
574408.70	4176150.54	0.15356	574428.70	4176150.54	0.15200
574448.70	4176150.54	0.15095	574468.70	4176150.54	0.14922
574348.70	4176170.54	0.14372	574368.70	4176170.54	0.14325
574388.70	4176170.54	0.14224	574408.70	4176170.54	0.14099
574428.70	4176170.54	0.13976	574448.70	4176170.54	0.13858
574468.70	4176170.54	0.13712	574348.70	4176190.54	0.13196
574368.70	4176190.54	0.13148	574388.70	4176190.54	0.13063
574408.70	4176190.54	0.12962	574428.70	4176190.54	0.12859
574448.70	4176190.54	0.12757	574468.70	4176190.54	0.12636
574247.00	4176096.44	0.19466	574227.00	4176116.44	0.17481
574247.00	4176116.44	0.17556	574267.00	4176116.44	0.17653
574287.00	4176116.44	0.17733	574247.00	4176136.44	0.15999
574267.00	4176136.44	0.16062	574207.00	4175936.44	0.50669
574227.00	4175936.44	0.52408	574247.00	4175936.44	0.53559
574267.00	4175936.44	0.55996	574187.00	4175956.44	0.42453
574207.00	4175956.44	0.43883	574227.00	4175956.44	0.45150
574247.00	4175956.44	0.45993	574267.00	4175956.44	0.47004
574167.00	4175976.44	0.36115	574187.00	4175976.44	0.37259
574207.00	4175976.44	0.38319	574227.00	4175976.44	0.39199
574247.00	4175976.44	0.39845	574167.00	4175996.44	0.32086
574187.00	4175996.44	0.32920	574207.00	4175996.44	0.33707
574227.00	4175996.44	0.34302	574247.00	4175996.44	0.34800
574167.00	4176016.44	0.28716	574187.00	4176016.44	0.29336
574207.00	4176016.44	0.29858	574227.00	4176016.44	0.30262

574207.00	4176036.44	0.26593	574496.48	4175809.26	1.60774
574494.17	4175823.52	1.40920	574514.17	4175823.52	1.26103
574534.17	4175823.52	1.13032	574554.17	4175823.52	1.01475
574494.17	4175843.52	1.14084	574514.17	4175843.52	1.04439
574534.17	4175843.52	0.95420	574554.17	4175843.52	0.87172
574574.17	4175843.52	0.80151	574594.17	4175843.52	0.73402

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES 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 ,

*** 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
574474.17	4175863.52	0.99431	574494.17	4175863.52	0.92730
574514.17	4175863.52	0.86346	574534.17	4175863.52	0.80241
574554.17	4175863.52	0.74536	574594.17	4175863.52	0.64473
574614.17	4175863.52	0.59837	574634.17	4175863.52	0.55618
574654.17	4175863.52	0.51766	574474.17	4175883.52	0.80960
574494.17	4175883.52	0.76467	574514.17	4175883.52	0.72039
574534.17	4175883.52	0.67751	574554.17	4175883.52	0.63717
574594.17	4175883.52	0.56331	574614.17	4175883.52	0.52751
574634.17	4175883.52	0.49475	574654.17	4175883.52	0.46471
574463.94	4175912.20	0.63633	574514.17	4175903.52	0.60790
574534.17	4175903.52	0.57640	574554.17	4175903.52	0.54672
574574.17	4175903.52	0.51923	574594.17	4175903.52	0.49138
574614.17	4175903.52	0.46366	574634.17	4175903.52	0.43840
574654.17	4175903.52	0.41536	574594.17	4175843.52	0.71286
574594.17	4175863.52	0.62544	574554.17	4175883.52	0.61493
574463.94	4175912.20	0.60714	574447.89	4175959.39	0.42572
574452.26	4175941.52	0.48592	574054.52	4175526.08	1.25865
574071.42	4175518.40	1.20798	574071.03	4175551.04	2.42617
574063.74	4175566.02	3.76353	574079.87	4175575.23	6.28405
574099.07	4175584.45	8.92823	574105.21	4175576.77	6.44582
574092.54	4175529.15	1.62234	574054.52	4175526.08	0.94700
574071.42	4175518.40	0.91274	574071.03	4175551.04	1.71370
574063.74	4175566.02	2.39962	574079.87	4175575.23	4.18090
574099.07	4175584.45	6.47909	574105.21	4175576.77	4.92223
574092.54	4175529.15	1.24059			

*** MODELOPTs: RegDFAULT 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)				OF TYPE	NETWORK GRID-ID
			MER Location					
ONSITE	1ST HIGHEST VALUE IS	48.14294 AT (	574379.33,	4175803.49,	18.38,	18.38,	1.50)	DC
	2ND HIGHEST VALUE IS	37.58013 AT (	574374.80,	4175824.17,	18.63,	18.63,	1.50)	DC
	3RD HIGHEST VALUE IS	37.36178 AT (	574394.80,	4175784.17,	17.71,	17.71,	1.50)	DC
	4TH HIGHEST VALUE IS	34.37189 AT (	574379.33,	4175803.49,	18.38,	18.38,	6.10)	DC
	5TH HIGHEST VALUE IS	32.54914 AT (	574394.80,	4175804.17,	17.53,	17.53,	1.50)	DC
	6TH HIGHEST VALUE IS	29.18223 AT (	574394.80,	4175784.17,	17.71,	17.71,	6.10)	DC
	7TH HIGHEST VALUE IS	26.45162 AT (	574374.80,	4175824.17,	18.63,	18.63,	6.10)	DC
	8TH HIGHEST VALUE IS	25.86204 AT (	574394.80,	4175804.17,	17.53,	17.53,	6.10)	DC
	9TH HIGHEST VALUE IS	23.71253 AT (	574394.80,	4175824.17,	18.21,	18.21,	1.50)	DC
	10TH HIGHEST VALUE IS	23.36024 AT (	574379.33,	4175803.49,	18.38,	18.38,	9.14)	DC
OFFSITE	1ST HIGHEST VALUE IS	20.10177 AT (	574144.33,	4175624.27,	17.14,	17.14,	1.50)	DC
	2ND HIGHEST VALUE IS	20.01774 AT (	574160.69,	4175632.36,	17.24,	17.24,	1.50)	DC
	3RD HIGHEST VALUE IS	19.69181 AT (	574128.78,	4175616.18,	17.09,	17.09,	1.50)	DC
	4TH HIGHEST VALUE IS	19.31040 AT (	574192.27,	4175647.46,	17.24,	17.24,	1.50)	DC
	5TH HIGHEST VALUE IS	14.29073 AT (	574160.69,	4175632.36,	17.24,	17.24,	6.10)	DC
	6TH HIGHEST VALUE IS	14.20118 AT (	574144.33,	4175624.27,	17.14,	17.14,	6.10)	DC
	7TH HIGHEST VALUE IS	14.13625 AT (	574192.27,	4175647.46,	17.24,	17.24,	6.10)	DC
	8TH HIGHEST VALUE IS	13.73465 AT (	574128.78,	4175616.18,	17.09,	17.09,	6.10)	DC
	9TH HIGHEST VALUE IS	12.99627 AT (	574197.93,	4175635.73,	17.23,	17.23,	1.50)	DC
	10TH HIGHEST VALUE IS	11.97604 AT (	574167.97,	4175618.02,	17.21,	17.21,	1.50)	DC

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

*** 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   7953 Informational Message(s)

A Total of   43872 Hours Were Processed

A Total of   7152 Calm Hours Identified

A Total of   801 Missing Hours Identified (1.83 Percent)

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

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

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

Appendix C. Construction Risk Calculations

Table C2
Residential MER Health Risk Calculations

Contaminant	Source		Model Output [1] ($\mu g/m^3$)	Emission Rates [2] (g/s)	MEIR Conc. ($\mu g/m^3$)	Total MEIR Conc. Annual Average ($\mu g/m^3$)
(a)	(b)		(c)	(d)	(e)	(f)
Residential Receptors - Unmitigated						
DPM	2021	On-Site Emissions	48.14	9.08E-03	4.37E-01	4.37E-01
		Truck Route	4.39	2.65E-06	1.16E-05	
	2022	On-Site Emissions	48.14	4.92E-03	2.37E-01	2.37E-01
		Truck Route	4.39	3.25E-06	1.43E-05	
	2023	On-Site Emissions	48.14	3.25E-03	1.57E-01	1.57E-01
		Truck Route	4.39	7.70E-07	3.38E-06	
					Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations	
$PM_{2.5}$	2021	On-Site Emissions	48.14	8.58E-03	4.13E-01	4.13E-01
		Truck Route	4.39	2.45E-06	1.08E-05	
	2022	On-Site Emissions	48.14	4.75E-03	2.29E-01	2.29E-01
		Truck Route	4.39	3.04E-06	1.34E-05	
	2023	On-Site Emissions	48.14	3.07E-03	1.48E-01	1.48E-01
		Truck Route	4.39	6.84E-07	3.01E-06	
				Maximum Annual $PM_{2.5}$ Concentration		**0.41**
Residential Receptors - Mitigated Run: Tier 4 Interim Engines for eq. >25 HP						
DPM	2021	On-Site Emissions	48.14	5.30E-04	2.55E-02	2.55E-02
		Truck Route	4.39	2.65E-06	1.16E-05	
	2022	On-Site Emissions	48.14	5.22E-04	2.51E-02	2.52E-02
		Truck Route	4.39	3.25E-06	1.43E-05	
	2023	On-Site Emissions	48.14	3.30E-04	1.59E-02	1.59E-02
		Truck Route	4.39	7.70E-07	3.38E-06	
					Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations	
$PM_{2.5}$	2021	On-Site Emissions	48.14	5.30E-04	2.55E-02	2.55E-02
		Truck Route	4.39	2.65E-06	1.16E-05	
	2022	On-Site Emissions	48.14	5.22E-04	2.51E-02	2.52E-02
		Truck Route	4.39	3.25E-06	1.43E-05	
	2023	On-Site Emissions	48.14	3.30E-04	1.59E-02	1.59E-02
		Truck Route	4.39	7.70E-07	3.38E-06	
				Maximum Annual $PM_{2.5}$ Concentration		**0.026**

Maximum Exposed Individual Resident (MEIR) UTM coordinates: 574379.33E, 4175803.49E

[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		MEIR	Weight	Contaminant			Dose (by age bin)		Carcinogenic Risks (by age bin)		**Total Cancer Risk**	**Chronic Hazards** [3]	
		Conc.	Fraction		URF	CPF	3rd Trimester	0 < 2 years	3rd Trimester	0 < 2 years		REL	RESP
		($\mu g/m^3$)			$(\mu g/m^3)^{-1}$	$(mg/kg/day)^{-1}$	(mg/kg-day)	(mg/kg-day)	per million	per million	per million	($\mu g/m^3$)	
(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)	(k)	(m)	(n)	(o)
Residential Receptors - Unmitigated													
2021	On & Off-	4.37E-01	1.00E+00	DPM	3.0E-04	1.1E+00	1.51E-04	4.57E-04	4.82E+00	1.49E+01	19.7	5.0E+00	8.75E-02
2022	Site	2.37E-01						2.48E-04		3.16E+01	31.6		4.74E-02
2023	Emission	1.57E-01						1.64E-04		3.45E+00	3.5		3.13E-02
										Total	**54.7**		**0.166**
Residential Receptors - Mitigated Run: Tier 4 Interim Engines for eq. >25 HP													
2021	On & Off-	2.55E-02	1.00E+00	DPM	3.0E-04	1.1E+00	8.83E-06	2.67E-05	2.82E-01	8.70E-01	1.2	5.0E+00	5.10E-03
2022	Site	2.52E-02						2.63E-05		3.35E+00	3.4		5.03E-03
2023	Emission	1.59E-02						1.66E-05		3.50E-01	0.3		3.17E-03
										Total	**4.9**		**0.013**

Maximum Exposed Individual Resident (MEIR) UTM coordinates: 574379.33E, 4175803.49E

		OEHHA age bin	3rd Trimester	0 < 2 years
		exposure year(s)	2021	2021-2023
Dose Exposure Factors:		exposure frequency (days/year)	350	350
		inhalation rate (L/kg-day) [1]	361	1090
		inhalation absorption factor	1	1
		conversion factor (mg/µg; m^3/L)	1.0E-06	1.0E-06
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	Risk Scalar [2]	3rd Trimester	0 < 2 years
	2021	0.51	0.25	0.26
	2022	1.00		1.00
	2023	0.17		0.17
	Total	1.67	0.25	1.42

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

[2] Risk scalar determined for each year of construction to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

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