Appendix D Health Risk Assessment

Appendices

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November 2018 | Health Risk Assessment

WEDGEWORTH ELEMENTARY SCHOOL

Hacienda-La Puente Unified School District

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1. Introduction

The Hacienda-La Puente Unified School District (District) plans to redevelop the existing Wedgeworth Elementary School on 10 acres of its existing 20-acre site. The new campus would be constructed on the southwest corner of the property. Wedgeworth Elementary School would remain in operation as the new campus is constructed. Once completed, students and staff would relocate to the new facility and demolition of the existing campus would commence. The project site is located at 16949 Wedgeworth Drive, Hacienda Heights, Los Angeles County, California.

Wedgeworth Elementary School is an existing school at the southeast corner of a 20-acre site bounded by the SR-60 freeway, Wedgeworth Drive, and Eagle Park Road. Four baseball fields and related structures and parking area are also located on the northern half of the property. The ballfields are not part of the school but were built and are operated by the Highlander Baseball organization. The remainder of the site is undeveloped.

Regulations pertaining to the siting of new schools or modernization of existing schools in California require compliance with the California Code of Regulations (CCR) Title 5 standards. For new schools, Title 5 studies must demonstrate that facilities with the potential to emit hazardous air pollutants within a quarter-mile radius of the school site will not constitute an actual or potential public health risk to students and staff that will attend the school. This health risk assessment (HRA) included conducting the following tasks:

- Emissions were evaluated associated with vehicles and trucks traveling on State Route (SR-60), which is approximately 350 feet north of the school site boundary. Because the school is within 500 feet of the edge of a freeway traffic lane or busy traffic corridor, criteria air pollutants as well as toxic air contaminants (TACs) were also evaluated to determine if air quality at the proposed site poses a short-term or long-term exposure risk to students and staff.

- Facilities within a quarter-mile (1,320-foot) radius of the proposed site were identified and evaluated that might reasonably emit hazardous or acutely hazardous air emissions.

- Air dispersion modeling, using the AERMOD computer model, was conducted to quantify maximum ground-level concentrations for receptors at the project site. Meteorological (met) data from the nearest South Coast Air Quality Management District (SCAQMD) met station with similar meteorological conditions were used to represent local weather conditions and prevailing winds.

- Cancer and non-cancer risks to students and staff attending the school site were determined, based on the results of the AERMOD modeling. The assessment considered exposure through the inhalation pathway. Cancer Potency Factors (CPFs) were used to determine carcinogenic risk and Recommended Exposure Limits (RELs) were used to determine non-carcinogenic risk.

1. Introduction

- A health risk assessment report has been prepared that compares the calculated risks with thresholds established by the SCAQMD and Office of Environmental Health Hazard Assessment (OEHHA).

The HRA and dispersion modeling methodologies used in the preparation of this report included all relevant and appropriate procedures developed by the US Environmental Protection Agency (USEPA, 2005) and OEHHA (2015). These methodologies and assumptions were used to ensure that the assessment effectively quantified school-based impacts associated with emission sources. It should be noted that these health impacts were based on conservative (i.e., health protective) assumptions. The USEPA and OEHHA note that conservative assumptions used in a risk assessment are intended to ensure that the estimated risks do not underestimate the actual risks (USEPA, 2005; OEHHA, 2015). Therefore, the estimated risks do 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 risk and usually overestimate exposures.

For this school-based risk assessment, the following conservative assumptions were used:

- It was assumed that maximum exposed receptor (both students and staff) stood outside at the site for 8 hours per weekday (8:00 AM to 4:00 PM, Monday to Friday), 180 days per year for 9 years (kindergarten to 8th grade students) or 250 days per year for 25 years (staff). In reality, students and staff are exposed to outdoor pollutant concentration levels only during breaks, lunch, and PE class and are exposed to reduced indoor pollutant concentrations for the remaining school hours. This would result in lower estimated risk values.

- The calculated risk for children from 2-16 years is multiplied by a factor of 3 to account for early life exposure and uncertainty in child versus adult exposure impacts (OEHHA, 2015).

Thus, the estimated risks in this HRA are conservative.

2. Project Description

Wedgeworth Elementary School is an existing school at the southeast corner of a 20-acre site bounded by the SR-60 freeway, Wedgeworth Drive, and Eagle Park Road. The project site is located 16949 Wedgeworth Drive, Hacienda Heights, Los Angeles County, California. Four baseball fields and related structures and parking area are also located on the northern half of the property. The ballfields are not part of the school but were built and are operated by the Highlander Baseball organization. The remainder of the site is undeveloped. The District plans to redevelop the site with a new 10-acre campus on the southwest corner of the property to house 1,200 kindergarten through 8th grade students. The remaining 10-acres would be sold to a residential developer. All four Highlander baseball fields may be displaced by the project, or some of them may be retained or relocated on campus. Construction of the school site could be completed as early as 2020.

The project site is bounded by Wedgeworth Drive to the south, Eagle Park Road to the west, Highlander baseball fields to the north, and the existing Wedgeworth Elementary School site to the east. The nearest freeway travel lane is 350 feet north of the site.

The project site and vicinity are depicted in Figure 1.

2. Project Description

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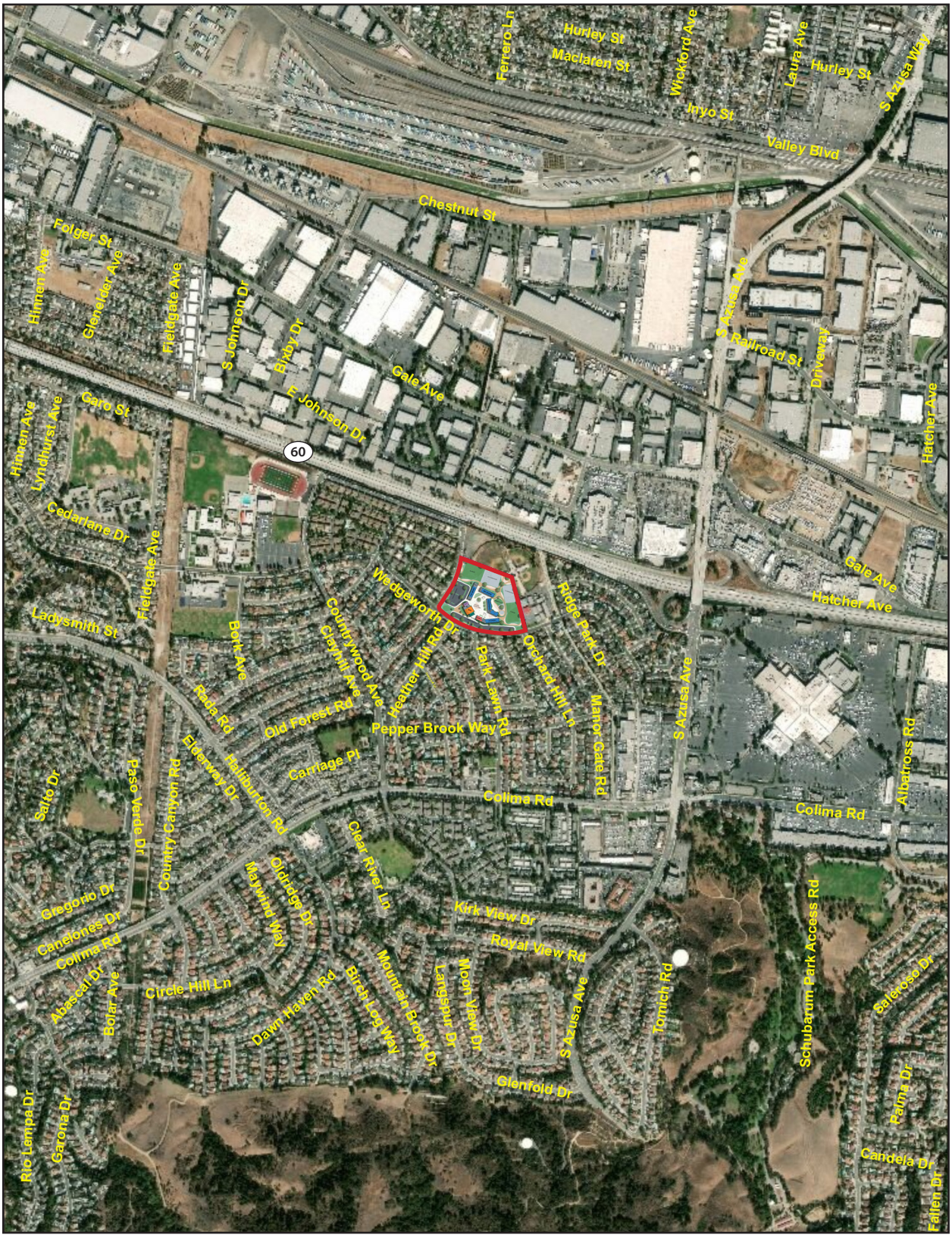
Figure 1 - Site Location



School Boundary

Note: The proposed school site plan has been superimposed within the school site boundary.

0 1,500
Scale (Feet)

Source: ESRI, 2018

PlaceWorks

2. Project Description

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3. Source Identification

The health risk assessment evaluated the impact of potential long-term (chronic) exposure to air toxic emissions generated by vehicles traveling along SR-60 (between mile posts 15.932 and 17.972). Due to the proximity of the project site to SR-60, potential long-term (chronic) exposure to air toxic emissions and short-term (acute) health impacts were evaluated from exposures to criteria pollutants (particulate matter, carbon monoxide, and nitrogen dioxide).

Additionally, properties within a quarter-mile radius (1,320 feet) were surveyed using the SCAQMD Facility Information Detail (FIND) database and aerial photography to identify facilities that have the potential to generate hazardous and acutely hazardous air emissions. Additionally, information obtained through the SCAQMD FIND database was reviewed to assist in the identification of potential emission sources.

A summary of the emissions sources evaluated during this assessment is provided below in Table 1. Appendix A contains a summary of all emission sources surveyed and interviewed.

Table 1 Emission Sources

Source	Address
State Route 60	Mile Posts 15.932-17.972
LA County, Fire Station 118	17056 Gale Avenue, City of Industry, CA 91745
Puente Hills Toyota, Inc.	17070 Gale Avenue, City of Industry, CA 91745

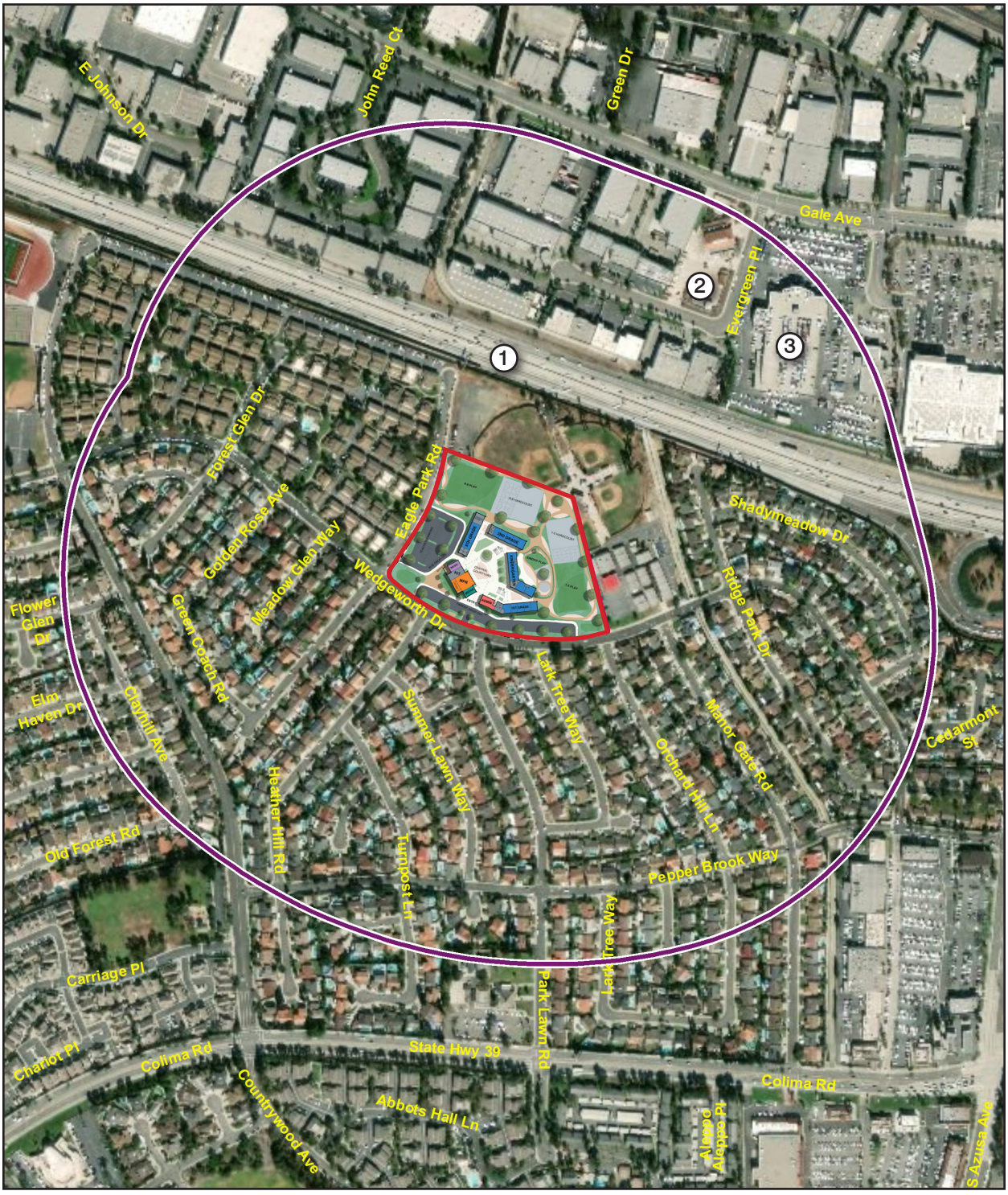
The project site and evaluated emission sources are depicted in Figure 2.

In addition to the nearby SR-60 and the stationary sources, the Union Pacific (UP) City of Industry Railyard is located approximately 0.75-mile north of the site. The UP City of Industry Railyard is located at 17225 East Arenth Avenue in the City of Industry. The railyard covers a narrow area of approximately 2 miles in length and nearly a quarter-mile wide. In 2008, California Air Resources Board (CARB) completed a health risk assessment to evaluate the impacts associated with toxic air contaminants emitted in and around the railyard (CARB, 2008a). The CARB HRA evaluated emissions from locomotives, cargo handling equipment, refrigeration units, and on-road diesel-fueled trucks idling and traveling at the railyard and within a one-mile distance of the railyard. The results of the HRA show that the area of the Wedgeworth Elementary School site is within the 9-year student cancer risk isopleth of 6.3 in a million and the 40-year worker (school staff) cancer risk isopleth of 5 in a million. These health risks are below the incremental cancer risk threshold of 10 in a million, which is further discussed in Section 6.1. Additionally, in 2008 a Diesel Particulate Mitigation Plan was implemented by CARB for the UP City of Industry Railyard (CARB, 2008b). Mitigation measures implemented for the railyard included retrofitting of idle control devises, cleaner line haul locomotives, use of ultra-low sulfur diesel fuel, cleaner cargo handling equipment, retirement of older locomotives from fleets, newer engine tiers for drayage fleet and cleaner transport refrigeration units. The Diesel Particulate Mitigation

3. Source Identification

Plan determined a 73 percent reduction in diesel particulate matter (DPM) emissions from the railyard by 2020 from implementation of existing and future mitigations. Therefore, potential health risks at the school site would be further reduced from the risks reported in the 2008 HRA, which were already below SCAQMD's significance thresholds. Therefore, emissions from the UP City of Industry Railyard are not anticipated to pose an actual or potential endangerment to students and staff occupying the project site, and the facility will not be further evaluated in this HRA.

Figure 2 - Emission Sources



School Boundary

1/4-Mile Radius

1 State Route 60

2 LA County, Fire Station 118

3 Puente Hills Toyota, Inc.

Note: The proposed school site plan has been superimposed within the school site boundary.

Source: ESRI, 2018

0 600
Scale (Feet)

PlaceWorks

3. Source Identification

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4. Emissions Inventory

4.1 ON-ROAD MOBILE SOURCES

Vehicle emissions contribute significantly to localized concentrations of air contaminants. Typically, emissions generated from these sources depend on vehicle mix, the percentage of heavy duty diesel trucks, the rate at which pollutants are generated during the course of travel, and the number of vehicles traveling along the roadway network.

The peak hourly traffic for the section of SR-60 nearest the school site was obtained from the California Department of Transportation, Traffic Branch (Caltrans). To determine variances in hourly traffic volumes, the assessment used data available through the Caltrans Performance Measurement System (Caltrans PeMS, 2018). The truck percentage for each evaluated roadway segment was used to estimate the number of diesel trucks traveling on the roadway. Table 2 lists the identified peak hourly traffic volumes and diesel truck percentage considered in the assessment.

Table 2 Vehicle Fleet Mix

Roadway	Peak Hourly Vehicle Traffic (vehicles per hour)	Truck Percentage
SR-60 (Mile Posts 15.932-17.972)	15,300	9.5

Source: Caltrans, 2017.

Additionally, for purposes of this analysis a one percent annual increase in traffic is assumed. CARB has developed the EMFAC2017 emission factor model to account for the emission standards representative of the California fleet. EMFAC2017 was used to identify pollutant emission rates for total organic gases (TOG), diesel particulate matter (DPM), carbon monoxide (CO) and nitrogen dioxide (NO_2) at the project build out year of 2020. The PM_{10} emission factor for diesel-fueled vehicles was used as the surrogate for DPM (CARB, 2017). The TOG speciation profile provided by the Bay Area Air Quality Management District (2012) was used to quantify the toxic air contaminants (TACs) associated with the TOG fraction.

For particulate matter (PM_{10}), emissions were quantified as the sum of re-entrainment of paved roadway dust and tailpipe emissions. The predictive emission equation developed by the USEPA (2011) was used to generate the entrained dust source strength.

A list of emitted compounds for the mobile-source category is presented in Table 3.

Table 3 Compounds Emitted from Mobile Sources

Source	Contaminant
SR-60 (gasoline vehicles and diesel trucks)	Diesel Particulate Matter (DPM) Total Organic Gases (TOG), toxic air contaminant species: Acetaldehyde, Acrolein, Benzene, 1,3-Butadiene, Ethyl Benzene, Formaldehyde, Hexane, Methanol, Methyl Ethyl Ketone, Naphthalene, Propylene, Styrene, Toluene, Xylenes Particulate Matter (PM_{10} and $PM_{2.5}$) Carbon Monoxide Nitrogen Dioxide

Note: EMFAC2017 generates emission factors for nitrogen oxides (NOx). NOx to NO2 conversion rate was 0.0796 for SR-60, derived from a report entitled Final Localized Significance Threshold Methodology (SCAQMD, 2008).

4.2 STATIONARY SOURCES

Contaminant release information and associated chemical species were identified through a review of available documentation for each source referenced in Section 3. To the degree practical, all contaminant emissions generated from each source location were considered in the analysis. The limiting factor for the inclusion of a compound was the availability of published exposure factors and other toxicity data enabling risks to be quantified and, where appropriate, target organs identified. The compounds emitted from each stationary source are listed in Table 4.

Table 4 Compounds Emitted from Stationary Sources

Source	Contaminant
LA County, Fire Station 118 – gasoline dispensing	Benzene
Puente Hills Toyota, Inc. – automotive refinishing and gasoline dispensing	Benzene

Appendix B contains a graphical representation of each emitting source. Appendix C presents the emission rate calculations for each source considered in the assessment.

5. Air Dispersion Modeling

To assess the impact of emitted compounds on individuals who may work and/or attend classes at the proposed school facility, air quality modeling using the AERMOD atmospheric dispersion model was performed. The model is a steady state Gaussian plume model and is recommended by SCAQMD for estimating ground level impacts from point and fugitive sources in simple and complex terrain.

The model requires additional input parameters, including chemical emission data and local meteorology. Meteorological (met) data provided by SCAQMD for the Azusa met station (2012-2016) was used to represent local weather conditions and prevailing winds. According to the data from the Azusa met station, the prevailing wind direction in the area of the project site is to the northeast. The wind rose is provided in Appendix C.

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 source and receptor locations. In addition, digital elevation model (DEM) data for the area were obtained and included in AERMOD to account for complex terrain.

For all modeling runs, a unit emission rate of 1 gram per second (g/s) was used. The unit emission rates were divided between the volume sources for SR-60. Two sets of volume sources were created for SR-60. One set representing the motor vehicles traveling along SR-60 was used to characterize emissions of TOG and criteria air pollutants. For this set of sources, a release height of 0.60 meter was used (CARB, 2000). The second set of sources representing truck traffic was used to characterize emissions of DPM. For this run, a release height of 4.15 meters was used (CARB, 2000). The model's hour-of-day (HROFDY) scalar option was invoked to predict concentrations from variable hourly emissions from vehicular traffic.

The maximum AERMOD concentrations from the output files were then multiplied by the emission rates calculated in Appendix C to obtain the maximum ground-level concentrations at the maximum exposed receptor (MER). The air dispersion model output is presented in Appendix D. The calculated MER concentrations used in the HRA are provided in Appendix E. The annual average concentrations from the model run were used to determine cancer risk and chronic non-cancer risk, and the maximum one-hour concentrations were used to determine acute non-cancer risk. Additionally, CARB's Hotspots Analysis and Reporting Program (HARP2), Risk Assessment Standalone Tool was used to determine the 8-hour chronic non-cancer risk; the program determines the 8-hour non-cancer risk from the annual average concentrations (CARB, 2018).

5. Air Dispersion Modeling

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6. Risk Characterizations

6.1 CARCINOGENIC CHEMICAL RISK

Carcinogenic compounds are not considered to have threshold levels (i.e., dose levels below which there are no risks). Any exposure, therefore, will have some associated risk. The SCAQMD has established a maximum incremental cancer risk of 10 in a million ($1x10^{-5}$) for CEQA projects and the OEHHA also sets a typical risk management level as 10 in a million (OEHHA, 2015).

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 ($\mu g/m^3$), averaged 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 proposed school population, 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. For this assessment, the default value of 1 was used. To represent the unique characteristics of the school population, the assessment employed the USEPA's guidance to develop viable dose estimates based on reasonable maximum exposure, defined as the "highest exposure that

is reasonably expected to occur" for a given receptor population. Lifetime risk values for the student population were adjusted to account for an exposure of 180 days per year for 9 years (kindergarten through 8th grade). In addition, the calculated risk for students is multiplied by an ASF weighting factor of 3 (for children ages 2 to 16) to account for early life sensitivity to pollutant exposures (OEHHA, 2015). To assess staff-related risk, exposures were adjusted to account for an employment period of 250 days per year for 25 years. This timeline is considered appropriate for potential workplace exposures established by OEHHA.

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

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

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
ED	=	exposure duration (years)
AT	=	averaging time period over which exposure duration is averaged (always 70 years)

The CPFs used in the assessment were obtained from OEHHA guidance. The cancer risk is calculated separately for the students and staff, because of age differences in sensitivity to carcinogens and age differences in intake rates. 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).

CARB's HARP2 Risk Assessment Standalone Tool was used to calculate the cancer risk values (CARB, 2018). The determined cancer risks attributed to each chemical exposure and summation of those risks are presented in Appendix E.

6.2 NON-CARCINOGENIC HAZARDS

An evaluation was conducted for the potential non-cancer effects of chronic and acute chemical exposures. Adverse health effects are evaluated by comparing the annual receptor level ground level concentration of each chemical compound with the appropriate Reference Exposure Level (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 and acute sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). For each discrete chemical exposure, target organs presented in regulatory guidance were used. To calculate the hazard index, each chemical concentration or dose is divided by the appropriate toxicity value. The ratios are summed for compounds affecting the same toxicological endpoint. A health hazard is presumed to exist where the total equals or exceeds one.

CARB's HARP2 Risk Assessment Standalone Tool was used to calculate the chronic, 8-hour, and acute (1-hour) health risk values (CARB, 2018), and the determined hazard indices are provided in Appendix E.

6.3 CRITERIA AIR POLLUTANTS

The State of California has promulgated ambient air quality standards for various pollutants. These standards were established to safeguard the public's health and welfare with specific emphasis on protecting those individuals susceptible to respiratory distress, such as asthmatics, the young, the elderly, and those with existing conditions that may be affected by increased pollutant concentrations. A list of criteria air pollutants considered in the assessment and their associated air quality standards are presented in Table 5.

Table 5 California Ambient Air Quality Standards

Pollutant	Standard	Health Effects
Carbon Monoxide (CO)	>9.0 ppm (8 hr avg.) >20.0 ppm (1 hr avg.)	1) Aggravation of angina pectoris and other aspects of coronary heart disease. 2) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease. 3) Impairment of central nervous system functions. 4) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	≥0.030 ppm (annual avg.) ≥0.18 ppm (1 hr avg.)	1) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups. 2) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes.
Particulates (PM_{10})	>50 $\mu g/m^3$ (24 hr avg.) >20 $\mu g/m^3$ (annual avg.)	1) Excess deaths from short-term exposures and the exacerbation of symptoms in sensitive individuals with respiratory disease. 2) Excess seasonal declines in pulmonary function especially in children.

Notes: ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
Source: California Code of Regulations, Title 17, Section 70200.

Pollutant emissions are considered to have a significant effect on the environment if they result in concentrations that create either a violation of an ambient air quality standard, contribute to an existing air quality violation, or expose sensitive receptors to significant pollutant concentrations. Should ambient air quality already exceed existing standards, SCAQMD has established significance criteria that identify incremental air concentrations for selected pollutants. According to SCAQMD's Localized Significance Threshold (LST) Methodology (2008), SCAQMD considers sensitive receptors to include residences, hospitals, or convalescent facilities where it is possible that an individual could be present for 24 hours per day. For school-based receptors, LSTs for 24-hour ambient air quality standards would not apply. However, LSTs for commercial receptors would apply for the annual average and shorter averaging periods, such as 1-hour and 8-hour averages, since a commercial (i.e., worker) receptor durations are typically no more than 8 hours and are more applicable to school-based receptors.

Table 6 outlines the significance thresholds considered for sites that are within an air basin where criteria pollutants exceed air quality standards.

6. Risk Characterizations

Table 6 Localized Significance Thresholds

Pollutant	Averaging Time	Significance Criteria
Carbon Monoxide (CO)	8 Hours 1 Hour	Project contributes to exceedance of 9.0 ppm Project contributes to exceedance of 20 ppm
Nitrogen Dioxide (NO_2)	Annual 1 Hour	Project contributes to exceedance of 0.03 ppm Project contributes to exceedance of 0.18 ppm
Particulates (PM_{10})	Annual	Project causes an incremental increase of 1.0 $\mu g/m^3$

Notes: ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
Source: SCAQMD, 2015. SCAQMD Air Quality Significance Thresholds accessed online at http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook.

The nearest active air quality monitoring station to the project site is the South San Gabriel Valley Monitoring Station. Background concentrations are based on the highest observed value for the most recent three-year period. PM_{10} data was not collected for the South San Gabriel Valley Monitoring Station. Therefore, PM_{10} data from the nearest monitoring station with available data (East San Gabriel Valley 2 Monitoring Station) were used for particulate analysis. A summary of the monitoring station data is presented in Table 7.

Table 7 South San Gabriel Valley Monitoring Station Summary

	Year				
Pollutant/Averaging Time	2016	2015	2014	Maximum	CAAQS
Carbon Monoxide (CO)					
1-Hour	2.8	2.8	4.0	4.0	20
8-Hour	1.3	1.7	2.5	2.5	9
Nitrogen Dioxide (NO_2)					
1-Hour	0.0632	0.0704	0.0867	0.0867	0.18
Annual	0.020	0.0205	0.0195	0.0205	0.030
Particulates (PM_{10})					
Annual	29.8	29.0	32.9	32.9	20

Note: Coarse Particulates (PM_{10}) from the East San Gabriel Valley 2 Monitoring Station are expressed in micrograms per cubic meter ($\mu g/m3$). All others are expressed in parts per million (ppm). NM – not monitored that particular year.
Source: SCAQMD, 2016. Historical Data by Year, https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year.

For carbon monoxide (CO) and nitrogen dioxide (NO_2), background concentrations are below the current air quality standards. Therefore, impacts are considered to be significant when pollutant concentrations, added to existing background levels, result in an exceedance of the CAAQS.

For particulate emissions, maximum background concentrations in the vicinity of the site exceed the California Ambient Air Quality Standard (CAAQS) for the annual average PM_{10} concentrations. Additionally for PM_{10}, the project site is within a non-attainment area for particulates (CARB, 2015). As a result, SCAQMD defines a significant impact as PM_{10} concentrations that exceed the specified localized significance threshold (LST) of 1.0 $\mu g/m^3$ for annually averaged concentrations.

Appendix E, Table E5, presents the criteria air pollutant ground level concentrations at the project site determined using AERMOD.

6.4 ACCIDENTAL RELEASES

Under the auspices of the California Accidental Release Prevention (CalARP) Program, a Risk Management Plan (RMP) is required to be conducted pursuant to the provisions of the federal Accidental Release Prevention program (Title 40, Code of Federal Regulations, Part 68) Article 2, Chapter 6.95 of the Health and Safety Code. The RMP is only required should a stationary source use more than a threshold quantity of a regulated hazardous substance, and includes a risk assessment of accidental releases.

A review of the available information collected during the source identification process (e.g., regulatory records review and interviews with business owner/operators) did not reveal the presence of any CalARP program facilities within 0.25 mile of the proposed site (The Right-to-Know Network, 2018).

6. Risk Characterizations

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7. Conclusions

The results of the health risk assessment are provided in Table 8. The excess cancer risk was calculated to be 1.5 per million for adult school staff and 2.4 per million for students. In comparison to the threshold level of 10 in a million, carcinogenic risks are well below the significance threshold value for both school staff and students. For non-carcinogenic effects, the chronic hazard index identified for each toxicological endpoint totaled less than one for both school staff and students. Therefore, chronic non-carcinogenic hazards are below the significance threshold. Additionally, the acute 1-hour and 8-hour non-carcinogenic hazards were also below the significance thresholds.

Table 8 Health Risk Assessment Results

Source	Cancer Risk (per million)		Chronic Hazard Index	Acute (1-Hour) Hazard Index	8-Hour Hazard Index
	Staff Exposure	Student Exposure			
All Sources	1.5	2.4	0.005	0.004	0.001
SCAQMD Threshold	10	10	1.0	1.0	1.0
Exceeds Threshold	**No**	**No**	**No**	**No**	**No**

Source: CARB HARP2 (2018).

A comparison of the current air quality standards with the results of the modeling analysis for SR-60 vehicle emissions is provided below:

- For carbon monoxide (CO), the maximum one-hour concentration of 0.10 ppm and the maximum eight-hour concentration of 0.04 ppm, when added to existing background levels, do not exceed the CAAQS.

- For nitrogen dioxide (NO_2), maximum one-hour and annual concentrations of 0.002 ppm and 0.00006 ppm were calculated, respectively. These concentrations, when added to existing background levels, do not exceed the CAAQS.

- For PM_{10}, an annual average concentration of 0.50 micrograms per cubic meter ($\mu g/m^3$) was predicted. The annual average concentration does not exceed the SCAQMD significance threshold of 1.0 $\mu g/m^3$.

Based on a comparison to the carcinogenic and non-carcinogenic thresholds established by OEHHA and SCAQMD, hazardous air emissions generated from the stationary and mobile sources within a quarter-mile radius are not anticipated to pose an actual or potential endangerment to students and staff occupying the project site and no mitigation measures are required.

7. Conclusions

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8. References

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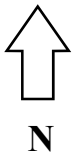
Appendix A. Stationary Emission Sources

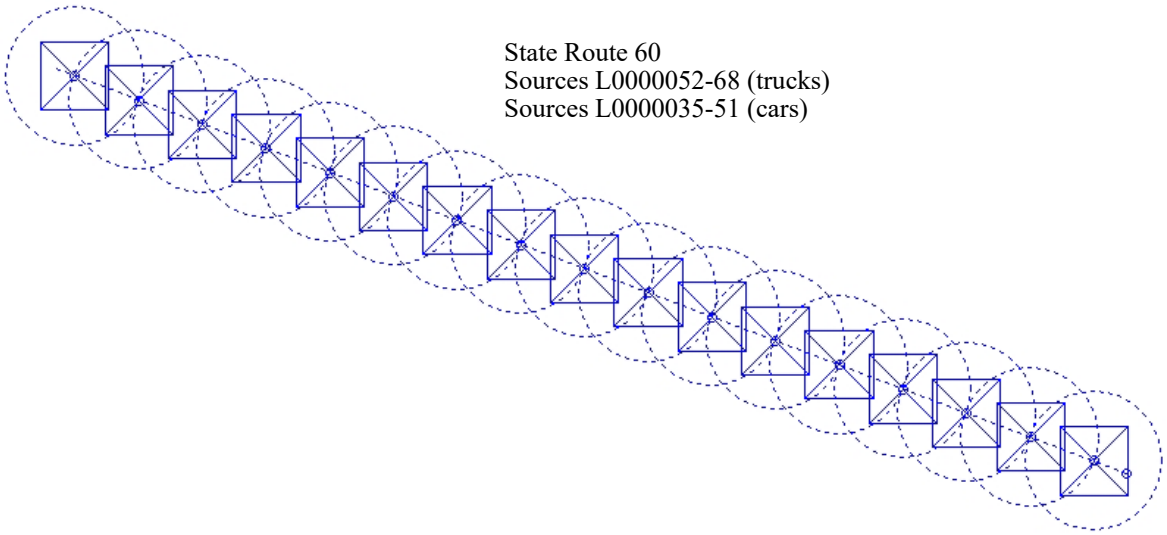
Table A - Stationary Emission Sources
Wedgeworth Elementary School
Health Risk Assessment

No.	FACILITY	AQMD ID	ADDRESS			CITY	ZIP	NOTES
2	LA Co., Fire Station 118	123938	17056	Gale	Ave	City of Industry	91745	Gasoline dispensing
3	Puente Hills Toyota, Inc.	128235	17070	Gale	Ave	City of Industry	91745	Spraybooth and gasoline dispensing
Omitted Facilities								
	Wilson High School	72748	16455	E. Wedgeworth	Dr	Hacienda Heights	91745	over a 1/4-mile away from site
	Hamilton Standard Controls	92646	17070	Gale	Ave	City of Industry	91745	inactive facility
	Comdial	50128	16960	Gale	Ave	City of Industry	91745	< 10 trucks per day

Appendix B. Graphical Representation of Emitting Sources

State Route 60
Mile Post 15.932 to 17.972
Sources L0000052-68 (trucks)
Sources L0000035-51 (cars)



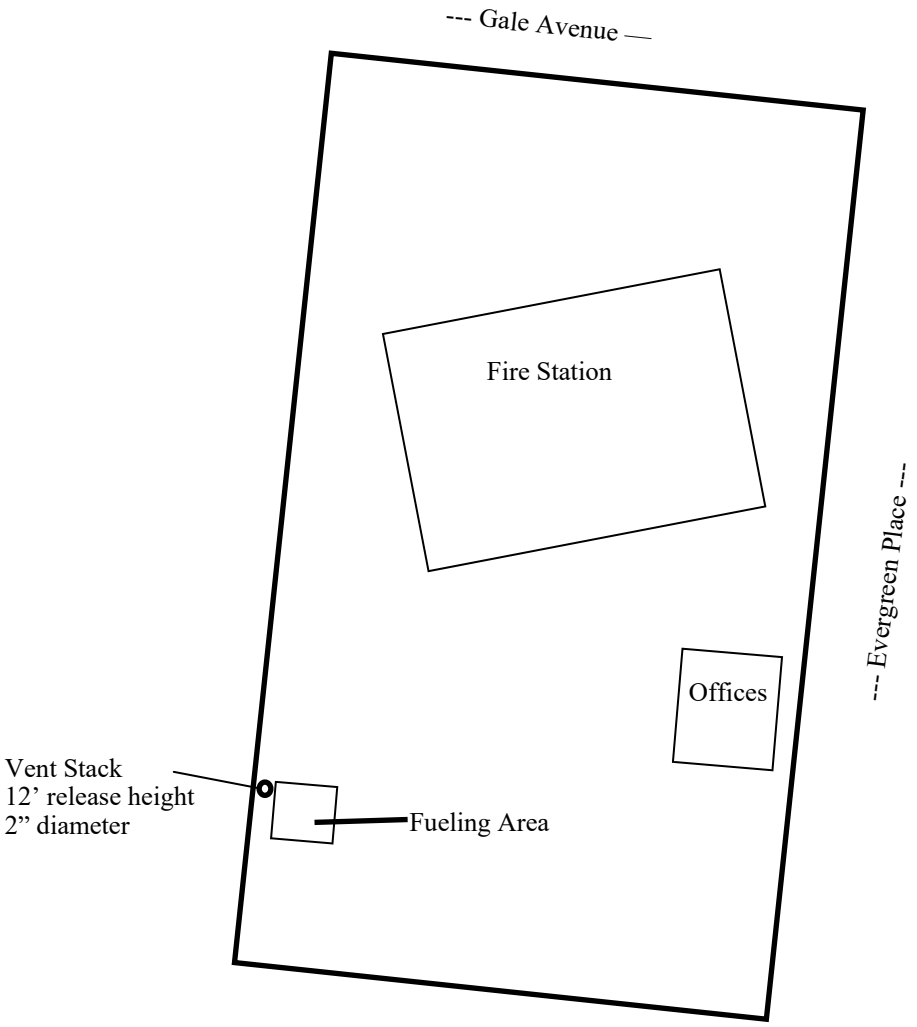


- Release height of 4.15 m and initial vertical dimension (δy) of 1.93 m is based upon California Air Resources Board's "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles" (2000). Release of 0.6 m used for gasoline-fueled vehicles.

Source 2
LA County Fire Station 118
17056 Gale Avenue
City of Industry, CA 91745
24 hours per day, 7 days per week

N

Chemical and Use Rate
Gasoline Dispensing: 5,000 gallons per month (maximum throughput)
SCAQMD Permit No. N29588

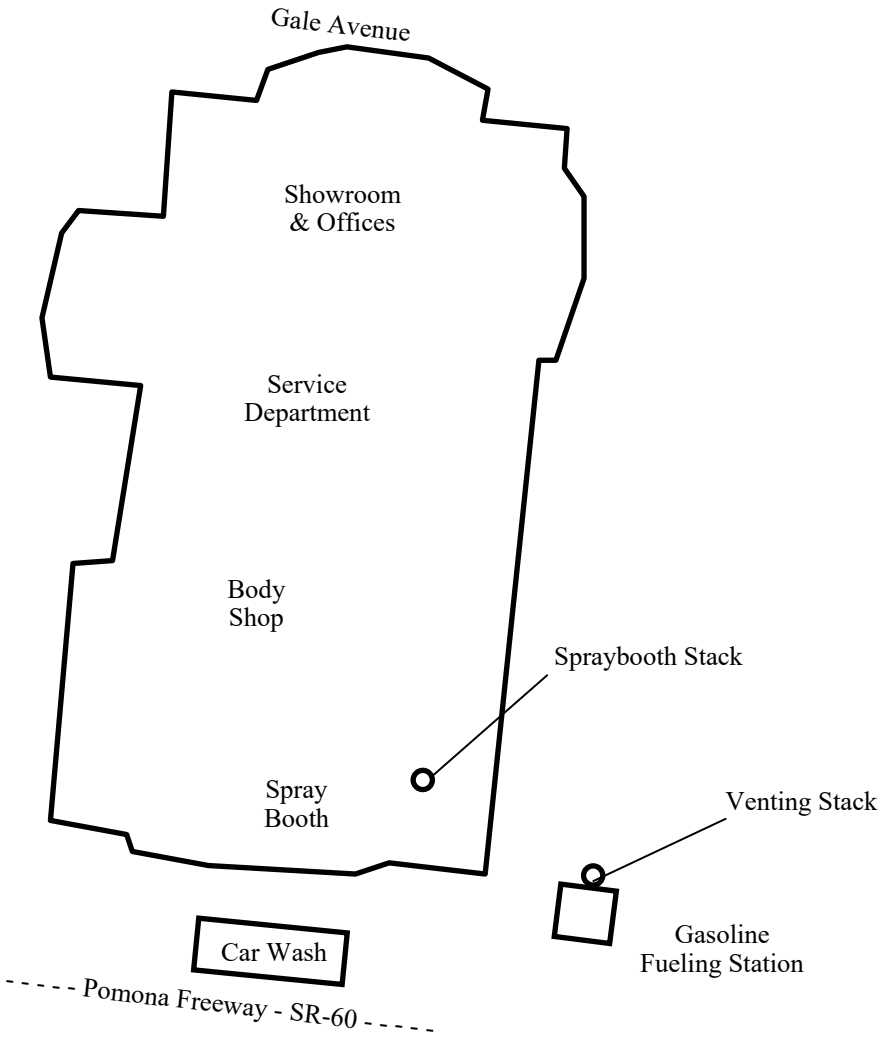


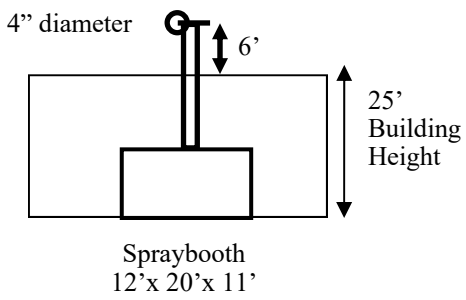
- Fueling area is based upon California Air Pollution Control Officers Association (CAPCOA) *Gasoline Service Station Industrywide Risk Assessment Guidelines* (1998). Volume source parameters: 4 m height; 13 m x 13 m area
- Volume Source Modeling (Refueling and hose permeation): Source height of 4 m, release height of 1 m, and δz of 0.93 m are based upon CAPCOA guidance (1998).
– Volume Source Modeling (Spillage): Source height of 4 m, release height of 0 m, and δz of 1.86 m are based upon based upon CAPCOA guidance (1998).
– Point Source Modeling (Transfer and Pressure Driven Losses): Stack parameters based upon CAPCOA guidance (1998).

Source 3
Puente Hills Toyota
17070 Gale Avenue
City of Industry, CA 91745
Spraybooth Hours: Tuesday and Thursday 12:00 PM -7:00 PM
Maintenance Operations: Monday - Friday 7:00 AM – 7:00 PM,
Saturday 8:00 AM - 7:00 PM, Sunday 8:00 - 5:00 PM

N

Chemical and Use Rate
2016 Air Emissions Report (AER): 0.001 pounds Benzene per year
Gasoline Throughput: 6,000 gallons per month.





Appendix C. Emission Rate Calculations

Appendix

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Vehicle Mix Worksheet

Table A: Traffic Volumes

Route	Mile Post	Traffic Data Year	Peak Hour Traffic (veh/hr)[1]	Truck Percentage (%)[1]	Annual Increase in Traffic (%)	School Buildout Year
State Route 60	15.932-17.972	2016	15,300	9.5%	1.00%	2020

Sources:

1. Caltrans, Traffic Data Branch (2016). Website: http://www.dot.ca.gov/trafficops/census/.

Table B: Highway Parameters

Link/Segment	Link length (m)	Width of roadway (m)	Source Separation (m)	Roadway Configuration	Mile Post	Speed
State Route 60	725	43.0	43.0	At-Grade	15.932-17.972	55 mph

Table C: Segment Volumes

Link/Segment	Period Length (years)	Hourly All Vehicles	Hourly TOG Vehicles	Hourly Diesel Vehicles [4]
2020 [1]	5	**15,921**	**14,417**	1,505
2025 [1]	5	16,733	15,152	1,581
2030 [1]	5	17,587	15,925	1,662
2035 [1]	5	18,484	16,737	1,747
2040 [1]	5	19,427	17,591	1,836
25-year weighted average [2]	25	17,631	**15,964**	**1,666**
9-year weighted average [3]	9	16,282	**14,744**	**1,539**

1 Increases in Peak Hourly Traffic based on annual traffic increase based on projected vehicle mile traveled (VMT) growth rate of 1% per year from 2020 to 2045 (CARB, EMFAC2017).

2 Represents the 25-year (staff) weighted average traffic volumes, accounting for annual increases in projected traffic.

3 Represents the 9-year (K-8th grade students) weighted average traffic volumes, accounting for annual increases in projected traffic.

4 Truck percentage of 9.5%, from CalTrans (2018), used to represent the diesel vehicle traffic along roadway segment.

On-Road Mobile Sources
Emission Rate Computation

TOG and DPM Emission Rates

Emission Rate = EF x VPH x L

EF = emission factor (g/mi)
VPH = Peak Hour Volume (vehicles per hour)

L = Link Length (m)		725
Conversion Factors	m/mi	1609.3
	sec/hr	3600

1 **State Route 60**
Mile Post 15.932-17.972

1a Gasoline Vehicles

Long-Term Hazards

TOG EF (g/mi) - 2020	0.0332
VPH - 25-year, gasoline fueled vehicles	15,964
TOG Emission Rate (g/s) - Staff	**6.63E-02**
TOG EF (g/mi) - 2020	0.0332
VPH - 9-year, gasoline fueled vehicles	14,744
TOG Emission Rate (g/s) - Students	**6.12E-02**

Acute Hazards

TOG EF (g/mi) - 2020	0.0332
VPH - 1-hour, gasoline fueled vehicles	14,417
TOG Emission Rate (g/s) - 1-hour	**5.99E-02**

1b Diesel Vehicles

DPM EF (g/mi) - 2020	0.0575
VPH - 25-year, diesel fueled vehicles	1,666
DPM Emission Rate (g/s) - Staff	**1.20E-02**
DPM EF (g/mi) - 2020	0.0575
VPH - 9-year, diesel fueled vehicles	1,539
DPM Emission Rate (g/s) - Students	**1.11E-02**

On-Road Mobile Souces
Emission Rate Computation

Particulate (PM_{10}) Emissions

PM_{10} Vehicular Emission Factor (g/mi)	0.0587

Source: EMFAC2017 emission factor for all vehicles in Los Angeles County at buildout year (2020).
Includes running emissions (RUNEX), brake wear (PMBW) and tire wear (PMTW) emission rates.

PM_{10} Reentrainment Emission Factor = $k * (sL)^{0.91} * (W)^{1.02} * (1 - P/4N)$

k = particle size multiplier (g/VMT)	1.00
sL = roadway specific silt loading (g/m^2)	0.02
W = average weight of vehicles on road (tons)	2.4
P = number of days >0.01 in of precipitation (LA County)	34
N = number of days in averaging period	365

PM_{10} Reentrainment EF (g/VMT)	0.06785

Source: CARB, 2014. Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust.

1 State Route 60

Mile Post 15.932-17.972

Emission Rate = EF x VPH x L

EF = emission factor (vehicle or reentrained dust)		
VPH = Peak Hour Volume (vehicles per hour)		15,921
L = Link Length (m)		725
Conversion Factors	m/mi	1,609.3
	sec/hr	3,600

Peak Hour Emission Rates

Vehicular Emission Rate (g/s)	1.17E-01
Reentrainment Emission Rate (g/s)	1.35E-01

PM_{10} Peak Hour Emission Rate Total (g/s)	**2.52E-01**

On-Road Mobile Sources
Emission Rate Computation

CO and NOx Emissions

Emission Rate = EF x VPH x L

EF = emission factor (g/mi)
VPH = Peak Hour Volume (vehicles per hour)

L = Link Length (m)		725
Conversion Factors	m/mi	1,609.3
	sec/hr	3,600

1 State Route 60
Mile Post 15.932-17.972

Carbon Monoxide

CO EF (g/mi) - 2020	0.8854
VPH - 2020	15,921
CO Peak Hour Emission Rate (g/s) - 2020	**1.76E+00**

Nitrogen Oxides

NOx EF (g/mi) - 2020	0.3470
VPH - 2020	15,921
NOx Peak Hour Emission Rate (g/s) - 2020	**6.91E-01**

Source: EMFAC2017 emission factor for all vehicles in Los Angeles County at buildout year (2020).

Initial Sigma Computation

Vertical Sigma Calculations - At-Grade or Above Grade Roadway

Initial Horizontal Dispersion Parameter (Sigma Y)
SY = (source separation distance)/2.15

Initial Vertical Dispersion Parameter (Sigma Z)
$SZ = (1.8 + 0.11(TR)) \times (60/30)^{0.2}$
TR = W2/U

Where:
W2 = traveled way half width (m)
U = average wind speed (m/s)

1 State Route 56

Width of Traveled Way (m)	43.0
Average Wind Speed (m/s)	1.76
Source Separation Distance (m)	43.0

SY = **20.00**
SZ = **3.61**

EMISSION FACTOR CALCULATIONS
EMFAC 2017

EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: LOS ANGELES
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Speed (mph)

55

TOTAL EMISSION RATES (g/mi)

	TOG	DPM	PM10	CO	NOx
Gas	**0.0332**				
DSL		**0.0575**			
NG					
Total	0.0347		0.0587	0.8854	0.3470

		Fleet Mix Percentage	VMT (Mi/day)	TOG (g/mi)	TOG Weighted	DPM (g/mi)	DPM Weighted	PM10 (g/mi)	PM10 Weighted	CO (g/mi)	CO Weighted	NOx (g/mi)	NOx Weighted
HHDT	GAS		546	0.7617	416	0.00114	1	0.09888	54	34.029	18578	4.9253	2689
HHDT	DSL	0.458	755692	0.0919	69457	0.06199	46843	0.14373	108614	0.3191	241113	3.4437	2602352
HHDT	NG		0	0	0	0	0	0.09774	0	0	0	0	0
LDA	GAS		8708060	0.0149	129694	0.0012	10492	0.04595	400178	0.6525	5681699	0.048	417751
LDA	DSL	0.043	70375	0.0174	1227	0.01046	736	0.05521	3886	0.1634	11499	0.1164	8189
LDT1	GAS		935294	0.042	39301	0.00195	1828	0.04670	43682	1.395	1304703	0.1467	137229
LDT1	DSL	0.000	448	0.1797	81	0.12085	54	0.16560	74	1.1625	521	1.3343	598
LDT2	GAS		2928901	0.0242	70852	0.00129	3775	0.04604	134843	0.9308	2726098	0.1034	302740
LDT2	DSL	0.011	18189	0.0118	216	0.00555	101	0.05030	915	0.0771	1402	0.0458	832
LHDT1	GAS		352127	0.0516	18183	0.001	351	0.08944	31493	1.0104	355787	0.2479	87302
LHDT1	DSL	0.142	233970	0.0626	14644	0.01347	3151	0.09791	22907	0.3349	78351	1.8673	436893
LHDT2	GAS		55835	0.0359	2002	0.00088	49	0.10206	5699	0.7286	40683	0.2464	13758
LHDT2	DSL	0.055	90837	0.0603	5478	0.01421	1291	0.11139	10118	0.3186	28938	1.7495	158918
MCY	GAS		68318	2.2127	151168	0.00155	106	0.01731	1183	17.68	1207887	1.116	76245
MDV	GAS		1854803	0.0408	75764	0.00142	2642	0.04617	85645	1.3119	2433245	0.1498	277803
MDV	DSL	0.023	37591	0.0093	348	0.005	188	0.04975	1870	0.117	4399	0.0556	2091
MH	GAS		18647	0.0894	1668	0.00119	22	0.14753	2751	2.1919	40873	0.4348	8109
MH	DSL	0.004	5913	0.0513	303	0.09298	550	0.23532	1391	0.2186	1293	3.3128	19587
MHDT	GAS		76518	0.1009	7723	0.00079	60	0.14313	10952	2.0682	158254	0.6054	46322
MHDT	DSL	0.248	408978	0.1164	47613	0.09685	39608	0.23919	97822	0.4155	169942	2.5939	1060854
OBUS	GAS		16763	0.0785	1316	0.00063	10	0.14297	2397	1.5985	26795	0.5459	9151
OBUS	DSL	0.014	23033	0.1455	3351	0.09455	2178	0.23689	5456	0.4823	11108	3.319	76448
SBUS	GAS		2207	0.0483	107	0.00058	1	0.75738	1671	0.9567	2111	0.3865	853
SBUS	DSL	0.003	5333	0.0588	314	0.03852	205	0.79132	4220	0.1596	851	6.4171	34221
UBUS	GAS		863	0.0085	7	0.00044	0	0.10946	94	0.1581	137	0.1417	122
UBUS	DSL	0.000	62	0.039	2	0.01323	1	0.14815	9	0.0765	5	0.9827	61
UBUS	NG		6139	3.8343	23538	0.00179	11	0.10396	638	35.491	217873	0.818	5021

Gas Total		15018883	498201	19339	720642	13996851	1380074		
DSL Total	1.00	1650420	143034	94906	257283	549422	4401044		
NG Total		6139	23538	11	638	217873	5021		

Note: Total Emission Rate (g/mi)=Sum of Weighted Emission Rates(g/day)/Sum of VMTs(mi/day)

Variable Emissions Worksheet
Caltrans PeMS Data

Caltrans PeMS VMT Aggregates - 7/1/2018 - 09/30/2018: SR-60							Normalizing Factors HROFDAY Scalars [1]		
	All Vehicles - Daily VMT			Trucks - Daily VMT					
Hour	Eastbound	Westbound	Total VMT	Eastbound	Westbound	Total VMT	Hour	Vehicles	Trucks
0	978	693	1,671	45	33	79	1	0.390	0.350
1	814	585	1,399	38	28	66	2	0.326	0.296
2	786	583	1,369	37	29	66	3	0.319	0.294
3	844	707	1,552	39	34	73	4	0.362	0.325
4	1,104	1,203	2,307	52	59	111	5	0.538	0.496
5	1,506	1,664	3,170	74	84	159	6	0.740	0.708
6	1,897	1,721	3,617	99	86	185	7	0.844	0.823
7	2,323	1,539	3,863	124	76	200	8	0.901	0.893
8	2,493	1,504	3,998	133	74	207	9	0.933	0.922
9	2,264	1,643	3,907	114	80	194	10	0.911	0.865
10	2,228	1,725	3,953	111	84	195	11	0.922	0.867
11	2,282	1,744	4,026	114	84	198	12	0.939	0.883
12	2,337	1,760	4,098	120	86	206	13	0.956	0.917
13	2,367	1,819	4,186	125	88	213	14	0.977	0.950
14	2,261	1,795	4,056	122	87	209	15	0.946	0.932
15	2,173	1,817	3,990	118	90	207	16	0.931	0.923
16	2,220	1,868	4,088	119	93	213	17	0.954	0.947
17	2,288	1,999	4,286	123	102	224	**18**	**1.000**	**1.000**
18	2,343	1,800	4,142	125	91	216	19	0.966	0.961
19	2,390	1,546	3,936	128	76	205	20	0.918	0.913
20	2,195	1,439	3,634	117	70	188	21	0.848	0.837
21	1,947	1,410	3,357	103	69	172	22	0.783	0.765
22	1,683	1,223	2,906	86	59	146	23	0.678	0.649
23	1,319	943	2,262	65	45	110	24	0.528	0.491
Max	2,493	1,999	4,286	133	102	224			

[1] School Hours: 8:00 AM - 4:00 PM (Hour 9-16)

Number of Days - PeMS Data
63.0

Truck Percentage Check	5.23%
Caltrans	9.50%

Report Description

Report	Aggregates>Time Series
Report link	***http://pems.dot.ca.gov/?report_form=1&dnode=VDS&content=loops&statio***
Report generated	10/29/2018 12:30
PeMS version	caltrans_pems-18.0.0

Report Parameters

Parameter	Value
Quantity	Vehicle Miles Traveled (VMT)
Data	72,564 Lane Points
Data Quality	0% Observed
Segment Type	VDS
Segment Name	Mainline VDS 773492 - W/O AZUSA 2
start date	07/01/2018 00:00:00
end date	09/30/2018 23:59:59
Day of Week	Mo,Tu,We,Th,Fr
Granularity	hour

Report Parameters

Parameter	Value
Quantity	Vehicle Miles Traveled (VMT)
Data	72,564 Lane Points
Data Quality	0% Observed
Segment Type	VDS
Segment Name	Mainline VDS 773490 - W/O AZUSA 2
start date	07/01/2018 00:00:00
end date	09/30/2018 23:59:59
Day of Week	Mo,Tu,We,Th,Fr
Granularity	hour

Source 2
LA County Fire Station 118
17056, Gale Avenue
City of Industry, California 91745

Operation: Gasoline/Diesel Dispensing

	hours	days	weeks
Temporal Profile:	24	7	52
	0	0	0

Materials: (1)

Unleaded Gasoline	5,000	gal/mo

Emission Factor: (2)

Phase II Fueling Non-ORVR	0.42	lbs VOC/1,000 gal
Phase II Fueling ORVR	0.021	lbs VOC/1,000 gal
Phase I Bulk Transfer Losses	0.15	lbs VOC/1,000 gal
Pressure Driven Losses	0.024	lbs VOC/1,000 gal
Phase II Fueling - Spillage	0.24	lbs VOC/1,000 gal
Hose Permeation (2017)	0.009	lbs VOC/1,000 gal

Volume Source Emissions (3)

Refueling (4)	0.13	lbs VOC/1,000 gal
Refueling Emissions	9.19E-04	lbs/hr
	1.16E-04	**g/s**
Spillage (5)	0.24	lbs VOC/1,000 gal
Spillage Emissions	1.65E-03	lbs/hr
	2.08E-04	**g/s**

Point Source Emissions (6)

Transfer and Pressure Losses (7)	0.17	lbs VOC/1,000 gal
Transfer and Pressure Emissior	1.20E-03	lbs/hr
	1.51E-04	**g/s**

(1) Gasoline dispensed amount based maximum throughput, per SCAQMD permit N30973. EVR Phase I and Phase II controls.

(2) Emission factors is based upon CARB's Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities (CARB, 2013). TAC speciation: 0.3% benzene for transfer, pressure losses and refueling emissions; 1% benzene for spillage California Air Pollution Control Officers Assocation (CAPCOA) Gasoline Service Station Industrywide Risk Assessment Guidelines (CAPCOA, 1998).

(3) Volume sources modeled as 4 m high, 13 m long and 13 m wide (CAPCOA, 1998).

(4) Refueling emission include fueling non-ORVR and ORVR vehicles (74% of vehicles; CARB, 2013) and hose permeation (2017 emission rate). Release height 1 m (CAPCOA, 1998).

(5) Release height 0 m for spillage (CAPCOA, 1998).

(6) Point sources modeled as vertical stack with release height 12 feet, diameter 2 inches, temperature 60F, and exit velocity 0.01 m/s (CAPCOA, 1998).

(7) Transfer and pressure driven loss emissions modeling as a single vent pipe (CAPCOA, 1998).

Source 3a
Puente Hills Toyota
17070, Gale Avenue
City of industry, California 91745

Operation: Gasoline/Diesel Dispensing

	hours	days	weeks
Temporal Profile:	12	5	52
	11	1	52
	9	1	52

Materials: (1)

Unleaded Gasoline	6,000	gal/mo

Emission Factor: (2)

Phase II Fueling Non-ORVR	0.42	lbs VOC/1,000 gal
Phase II Fueling ORVR	0.021	lbs VOC/1,000 gal
Phase I Bulk Transfer Losses	0.15	lbs VOC/1,000 gal
Pressure Driven Losses	0.024	lbs VOC/1,000 gal
Phase II Fueling - Spillage	0.24	lbs VOC/1,000 gal
Hose Permeation (2017)	0.009	lbs VOC/1,000 gal

Volume Source Emissions (3)

Refueling (4)	0.13	lbs VOC/1,000 gal
Refueling Emissions	2.31E-03	lbs/hr
	2.92E-04	**g/s**
Spillage (5)	0.24	lbs VOC/1,000 gal
Spillage Emissions	4.15E-03	lbs/hr
	5.23E-04	**g/s**

Point Source Emissions (6)

Transfer and Pressure Losses (7)	0.17	lbs VOC/1,000 gal
Transfer and Pressure Emissior	3.35E-03	lbs/hr
	4.22E-04	**g/s**

(1) Gasoline dispensed amount based maximum throughput, per SCAQMD permit N30973. EVR Phase I and Phase II controls.

(2) Emission factors is based upon CARB's Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities (CARB, 2013). TAC speciation: 0.3% benzene for transfer, pressure losses and refueling emissions; 1% benzene for spillage California Air Pollution Control Officers Assocation (CAPCOA) Gasoline Service Station Industrywide Risk Assessment Guidelines (CAPCOA, 1998).

(3) Volume sources modeled as 4 m high, 13 m long and 13 m wide (CAPCOA, 1998).

(4) Refueling emission include fueling non-ORVR and ORVR vehicles (74% of vehicles; CARB, 2013) and hose permeation (2017 emission rate). Release height 1 m (CAPCOA, 1998).

(5) Release height 0 m for spillage (CAPCOA, 1998).

(6) Point sources modeled as vertical stack with release height 12 feet, diameter 2 inches, temperature 60F, and exit velocity 0.01 m/s (CAPCOA, 1998).

(7) Transfer and pressure driven loss emissions modeling as a single vent pipe (CAPCOA, 1998).

Source 3b
Puente Hills Toyota
17070, Gale Avenue
City of industry, California 91745

Operation: Automotive Repair & Fuel Dispensing

	hours	days	weeks
Temporal Profile: [1]	7	2	52

Emissions: [2]

Benzene	1.00E-03	lbs/yr
Total Emissions	1.37E-06	lbs/hr
	1.73E-07	**g/s**

Point Source Specifications (vertical release, capped):

Stack Flowrate	16,500	acfm
Stack Temperature	298	K
Stack Diameter	0.33	ft
Stack Height	31.0	ft

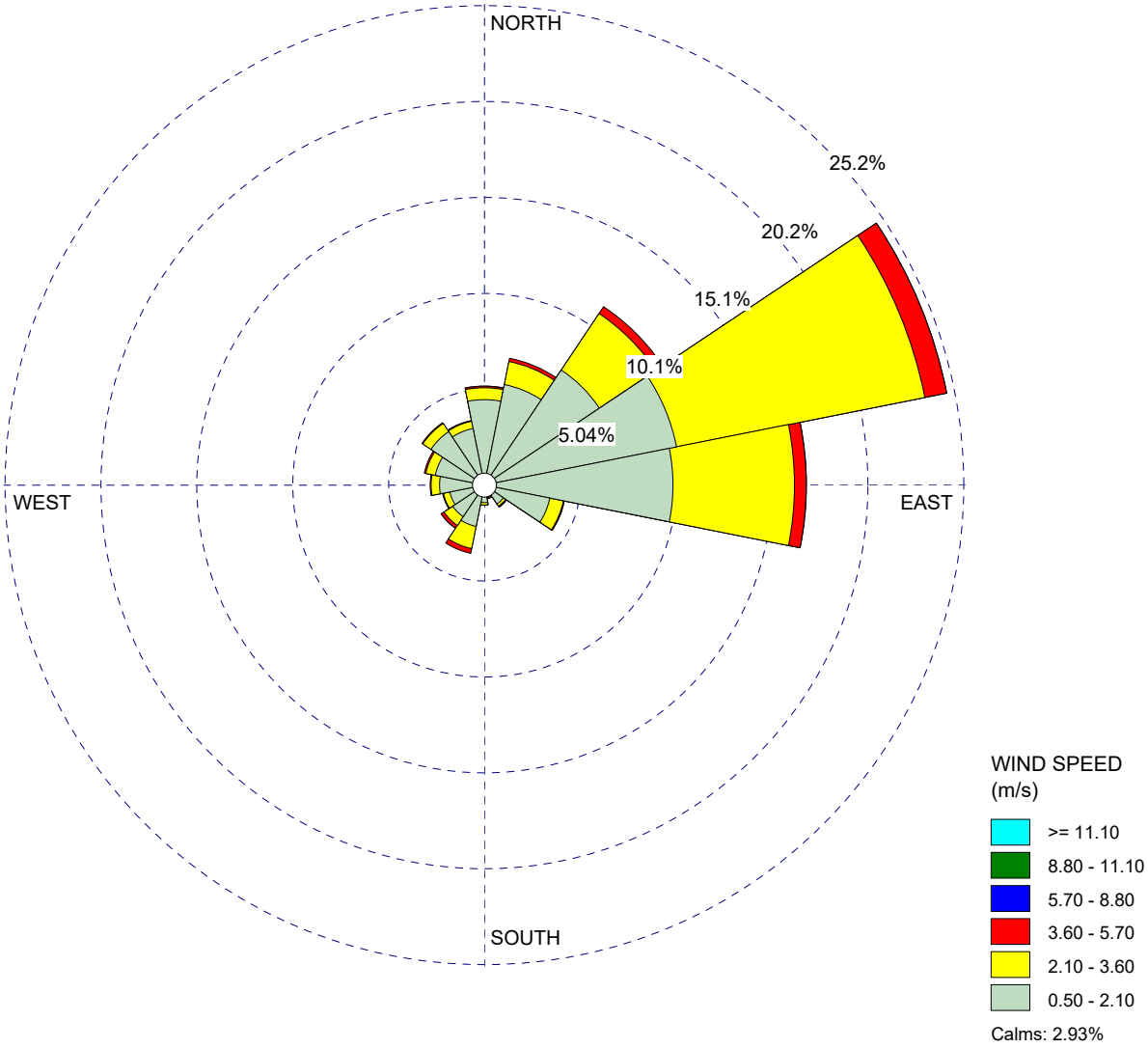
(1) Spraybooth operational from 12:00 PM to 7:00 PM Tuesdays and Thursdays.
(2) Benzene emissions from SCAQMD 2016 Air Emissions Report (AER).

WIND ROSE PLOT:

Azusa Meteorological Station
2012-16

DISPLAY:

Wind Speed
Flow Vector (blowing to)



COMMENTS: School Hours: Mon-Fri, 8AM-4PM	DATA PERIOD: **Start Date: 1/1/2012 - 08:00** **End Date: 12/31/2016 - 15:00**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **2.93%**	TOTAL COUNT: **14225 hrs.**	
	AVG. WIND SPEED: **1.76 m/s**	DATE: **11/6/2018**	PROJECT NO.: **HLPU-01.0**

WRPLOT View - Lakes Environmental Software

Appendix D. Air Dispersion Model Output

Appendix

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Results Summary

Wedgeworth Elementary School
HRA, Haceinda Heights

Concentration - Source Group: CARS SR-60

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	62.12472	ug/m^3	413438.80	3762304.65	125.42	0.00	125.42	12/1/2014, 16
8-HR	1ST	24.49755	ug/m^3	413438.80	3762304.65	125.42	0.00	125.42	12/19/2013, 16
PERIOD		1.99495	ug/m^3	413438.80	3762304.65	125.42	0.00	125.42	

Concentration - Source Group: FUELFS 2 - Refueling

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	120.27519	ug/m^3	413458.80	3762284.65	125.47	0.00	125.47	2/15/2012, 15
PERIOD		0.64987	ug/m^3	413438.80	3762304.65	125.42	0.00	125.42	

Concentration - Source Group: FUELTOY 3a - Refueling

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	30.28350	ug/m^3	413468.80	3762244.65	125.49	0.00	125.49	12/19/2013, 12
PERIOD		0.41810	ug/m^3	413458.80	3762284.65	125.47	0.00	125.47	

Results Summary

Wedgeworth Elementary School
HRA, Haceinda Heights

Concentration - Source Group: SB 3b - Spraybooth

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	10.93024	ug/m^3	413308.80	3762314.65	125.63	0.00	125.63	12/19/2013, 16
PERIOD		0.02389	ug/m^3	413458.80	3762284.65	125.47	0.00	125.47	

Concentration - Source Group: SPILLFS 2 - Spillage

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	135.48539	ug/m^3	413468.80	3762244.65	125.49	0.00	125.49	2/15/2012, 15
PERIOD		0.65319	ug/m^3	413438.80	3762304.65	125.42	0.00	125.42	

Concentration - Source Group: SPILLTOY 3a- Spillage

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	36.56940	ug/m^3	413468.80	3762244.65	125.49	0.00	125.49	12/19/2013, 12
PERIOD		0.41560	ug/m^3	413458.80	3762284.65	125.47	0.00	125.47	

Concentration - Source Group: STCKFS 2- Venting

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	100.84144	ug/m^3	413458.80	3762284.65	125.47	0.00	125.47	2/15/2012, 15
PERIOD		0.59074	ug/m^3	413438.80	3762304.65	125.42	0.00	125.42	

Results Summary

Wedgeworth Elementary School
HRA, Haceinda Heights

Concentration - Source Group: STCKTOY 3a - Venting

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	47.32601	ug/m^3	413448.80	3762294.65	125.47	0.00	125.47	12/12/2014, 12
PERIOD		0.43616	ug/m^3	413458.80	3762284.65	125.47	0.00	125.47	

Concentration - Source Group: TRUCKS SR-60

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		1.92609	ug/m^3	413438.80	3762304.65	125.42	0.00	125.42	

```
*** AERMOD - VERSION  18081 ***   *** Wedgeworth Elementary School                                  ***        11/05/18
*** AERMET - VERSION  16216 ***   *** HRA, Hacienda Heights                                         ***        12:43:38
                                                                                                              PAGE   1
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                        ***     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    41 Source(s),
  for Total of    1 Urban Area(s):
  Urban Population =   9818605.0 ;  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:
        ADJ_U*   - Use ADJ_U* option for SBL in AERMET
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of:  OTHER

**Model Calculates  2 Short Term Average(s) of:   1-HR   8-HR
    and Calculates PERIOD Averages

**This Run Includes:     41 Source(s);       9 Source Group(s); and     539 Receptor(s)

               with:      3 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:     38 VOLUME source(s)
                and:      0 AREA type source(s)
                and:      0 LINE 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.
```

Model Output
Unit Emission Rates (1 g/s)

```
**The AERMET Input Meteorological Data Version Date:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
         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) =   182.00 ;  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 =      4.0 MB of RAM.

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

**Detailed Error/Message File:   Wedgeworth Elemntary School.err
**File for Summary of Results:   Wedgeworth Elemntary School.sum
```

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BLDG EXISTS	URBAN SOURCE	CAP/ HOR	EMIS RATE SCALAR VARY BY
3b	0	0.10000E+01	413711.4	3762397.8	123.1	9.45	298.00	980.01	0.10	YES	YES	NO	HRDOW7
2_vent	0	0.10000E+01	413571.3	3762517.0	121.9	3.66	288.71	0.01	0.05	NO	YES	NO	HRDOW
3a_vent	0	0.10000E+01	413740.7	3762382.5	123.2	3.66	288.71	0.01	0.05	YES	YES	NO	HRDOW

*** AERMOD - VERSION 18081 *** *** Wedgeworth Elementary School *** 11/05/18
*** AERMET - VERSION 16216 *** *** HRA, Hacienda Heights *** 12:43:38
PAGE 3

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** 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
L0000035	0	0.58824E-01	413707.0	3762294.2	125.0	0.60	20.00	3.61	YES	HRDOW
L0000036	0	0.58824E-01	413666.8	3762309.4	124.8	0.60	20.00	3.61	YES	HRDOW
L0000037	0	0.58824E-01	413626.6	3762324.5	124.7	0.60	20.00	3.61	YES	HRDOW
L0000038	0	0.58824E-01	413586.3	3762339.7	124.5	0.60	20.00	3.61	YES	HRDOW
L0000039	0	0.58824E-01	413546.1	3762354.9	124.5	0.60	20.00	3.61	YES	HRDOW
L0000040	0	0.58824E-01	413505.8	3762370.0	124.4	0.60	20.00	3.61	YES	HRDOW
L0000041	0	0.58824E-01	413465.6	3762385.2	124.4	0.60	20.00	3.61	YES	HRDOW
L0000042	0	0.58824E-01	413425.4	3762400.3	124.2	0.60	20.00	3.61	YES	HRDOW
L0000043	0	0.58824E-01	413385.1	3762415.5	124.2	0.60	20.00	3.61	YES	HRDOW
L0000044	0	0.58824E-01	413344.9	3762430.6	124.0	0.60	20.00	3.61	YES	HRDOW
L0000045	0	0.58824E-01	413304.6	3762445.8	124.1	0.60	20.00	3.61	YES	HRDOW
L0000046	0	0.58824E-01	413264.4	3762460.9	123.9	0.60	20.00	3.61	YES	HRDOW
L0000047	0	0.58824E-01	413224.1	3762476.1	123.9	0.60	20.00	3.61	YES	HRDOW
L0000048	0	0.58824E-01	413183.9	3762491.2	123.7	0.60	20.00	3.61	YES	HRDOW
L0000049	0	0.58824E-01	413143.7	3762506.4	123.8	0.60	20.00	3.61	YES	HRDOW
L0000050	0	0.58824E-01	413103.4	3762521.5	123.5	0.60	20.00	3.61	YES	HRDOW
L0000051	0	0.58824E-01	413063.2	3762536.7	123.6	0.60	20.00	3.61	YES	HRDOW
L0000052	0	0.58824E-01	413707.0	3762294.2	125.0	4.15	20.00	3.61	YES	HRDOW
L0000053	0	0.58824E-01	413666.8	3762309.4	124.8	4.15	20.00	3.61	YES	HRDOW
L0000054	0	0.58824E-01	413626.6	3762324.5	124.7	4.15	20.00	3.61	YES	HRDOW
L0000055	0	0.58824E-01	413586.3	3762339.7	124.5	4.15	20.00	3.61	YES	HRDOW
L0000056	0	0.58824E-01	413546.1	3762354.9	124.5	4.15	20.00	3.61	YES	HRDOW
L0000057	0	0.58824E-01	413505.8	3762370.0	124.4	4.15	20.00	3.61	YES	HRDOW
L0000058	0	0.58824E-01	413465.6	3762385.2	124.4	4.15	20.00	3.61	YES	HRDOW
L0000059	0	0.58824E-01	413425.4	3762400.3	124.2	4.15	20.00	3.61	YES	HRDOW
L0000060	0	0.58824E-01	413385.1	3762415.5	124.2	4.15	20.00	3.61	YES	HRDOW
L0000061	0	0.58824E-01	413344.9	3762430.6	124.0	4.15	20.00	3.61	YES	HRDOW
L0000062	0	0.58824E-01	413304.6	3762445.8	124.1	4.15	20.00	3.61	YES	HRDOW
L0000063	0	0.58824E-01	413264.4	3762460.9	123.9	4.15	20.00	3.61	YES	HRDOW
L0000064	0	0.58824E-01	413224.1	3762476.1	123.9	4.15	20.00	3.61	YES	HRDOW
L0000065	0	0.58824E-01	413183.9	3762491.2	123.7	4.15	20.00	3.61	YES	HRDOW
L0000066	0	0.58824E-01	413143.7	3762506.4	123.8	4.15	20.00	3.61	YES	HRDOW
L0000067	0	0.58824E-01	413103.4	3762521.5	123.5	4.15	20.00	3.61	YES	HRDOW
L0000068	0	0.58824E-01	413063.2	3762536.7	123.6	4.15	20.00	3.61	YES	HRDOW
2_spill	0	0.10000E+01	413568.3	3762508.2	122.1	0.00	3.02	1.86	YES	HRDOW
2_refuel	0	0.10000E+01	413568.3	3762508.2	122.1	1.00	3.02	1.86	YES	HRDOW
3a_spill	0	0.10000E+01	413732.3	3762377.2	123.2	0.00	3.02	1.86	YES	HRDOW
3a_fuell	0	0.10000E+01	413732.3	3762377.2	123.2	1.00	3.02	1.86	YES	HRDOW

```
*** AERMOD - VERSION  18081 ***   *** Wedgeworth Elementary School                                  ***        11/05/18
*** AERMET - VERSION  16216 ***   *** HRA, Hacienda Heights                                         ***        12:43:38
                                                                                                              PAGE   4
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                      *** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID                                              SOURCE IDs
-----------                                              ----------

 CARS       L0000035    , L0000036    , L0000037    , L0000038    , L0000039    , L0000040    , L0000041    , L0000042    ,
            L0000043    , L0000044    , L0000045    , L0000046    , L0000047    , L0000048    , L0000049    , L0000050    ,
            L0000051    ,

 2_refuel     2_refuel      ,

 3a_fuell    3a_fuell     ,

 3b         3b          ,

 2_spill    2_spill     ,

 3a_spill   3a_spill    ,

 2_vent     2_vent      ,

 3a_vent    3a_vent     ,

 TRUCKS     L0000052    , L0000053    , L0000054    , L0000055    , L0000056    , L0000057    , L0000058    , L0000059    ,
            L0000060    , L0000061    , L0000062    , L0000063    , L0000064    , L0000065    , L0000066    , L0000067    ,
            L0000068    ,


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

 URBAN ID   URBAN POP                                     SOURCE IDs
 --------   ---------                                     ----------

             9818605.   L0000035    , L0000036    , L0000037    , L0000038    , L0000039    , L0000040    , L0000041    ,
L0000042    ,
            L0000043    , L0000044    , L0000045    , L0000046    , L0000047    , L0000048    , L0000049    , L0000050    ,

            L0000051    , L0000052    , L0000053    , L0000054    , L0000055    , L0000056    , L0000057    , L0000058    ,

            L0000059    , L0000060    , L0000061    , L0000062    , L0000063    , L0000064    , L0000065    , L0000066    ,

            L0000067    , L0000068    , 2_spill     , 2_refuel      , 3a_spill    , 3a_fuell     , 3b          , 2_vent      ,

            3a_vent     ,
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 3b

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	7.6,	89.1,	139.4,	-22.9,	33.2,	2	7.6,	103.6,	141.8,	-30.3,	37.8,
3	7.6,	115.8,	142.7,	-38.2,	41.7,	4	7.6,	124.8,	143.6,	-46.4,	44.5,
5	7.6,	133.8,	140.1,	-53.1,	47.9,	6	7.6,	139.5,	132.4,	-58.2,	50.2,
7	7.6,	141.0,	120.6,	-61.5,	51.0,	8	7.6,	140.5,	105.2,	-63.0,	51.3,
9	7.6,	139.1,	90.5,	-63.5,	50.8,	10	7.6,	139.4,	89.1,	-77.8,	46.8,
11	7.6,	141.8,	103.6,	-89.6,	40.5,	12	7.6,	142.7,	115.8,	-99.6,	33.1,
13	7.6,	143.6,	124.8,	-107.0,	25.4,	14	7.6,	140.1,	133.8,	-114.7,	17.0,
15	7.6,	132.4,	139.5,	-119.9,	8.0,	16	7.6,	120.6,	141.0,	-121.5,	-1.2,
17	7.6,	105.2,	140.5,	-121.5,	-10.4,	18	7.6,	90.5,	139.1,	-120.4,	-18.3,
19	7.6,	89.1,	139.4,	-116.5,	-33.2,	20	7.6,	103.6,	141.8,	-111.5,	-37.8,
21	7.6,	115.8,	142.7,	-104.5,	-41.7,	22	7.6,	124.8,	143.6,	-97.2,	-44.5,
23	7.6,	133.8,	140.1,	-87.0,	-47.9,	24	7.6,	139.5,	132.4,	-74.2,	-50.2,
25	7.6,	141.0,	120.6,	-59.1,	-51.0,	26	7.6,	140.5,	105.2,	-42.2,	-51.3,
27	7.6,	139.1,	90.5,	-26.9,	-50.8,	28	7.6,	139.4,	89.1,	-11.4,	-46.8,
29	7.6,	141.8,	103.6,	-14.0,	-40.5,	30	7.6,	142.7,	115.8,	-16.2,	-33.1,
31	7.6,	143.6,	124.8,	-17.9,	-25.4,	32	7.6,	140.1,	133.8,	-19.0,	-17.0,
33	7.6,	132.4,	139.5,	-19.6,	-8.0,	34	7.6,	120.6,	141.0,	-19.6,	1.2,
35	7.6,	105.2,	140.5,	-18.9,	10.4,	36	7.6,	90.5,	139.1,	-18.7,	18.3,

SOURCE ID: 3a_vent

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	0.0,	0.0,	0.0,	0.0,	0.0,	2	0.0,	0.0,	0.0,	0.0,	0.0,
3	0.0,	0.0,	0.0,	0.0,	0.0,	4	0.0,	0.0,	0.0,	0.0,	0.0,
5	0.0,	0.0,	0.0,	0.0,	0.0,	6	0.0,	0.0,	0.0,	0.0,	0.0,
7	0.0,	0.0,	0.0,	0.0,	0.0,	8	7.6,	140.5,	105.2,	-89.2,	71.5,
9	7.6,	139.1,	90.5,	-92.8,	66.2,	10	7.6,	139.4,	89.1,	-109.2,	56.8,
11	7.6,	141.8,	103.6,	-122.3,	44.9,	12	7.6,	142.7,	115.8,	-132.6,	31.8,
13	7.6,	143.6,	124.8,	-139.2,	18.4,	14	7.6,	140.1,	133.8,	-145.3,	4.4,
15	7.6,	132.4,	139.5,	-147.9,	-9.7,	16	7.6,	120.6,	141.0,	-145.9,	-23.5,
17	7.6,	105.2,	140.5,	-141.7,	-36.6,	18	7.6,	90.5,	139.1,	-135.7,	-47.6,
19	0.0,	0.0,	0.0,	0.0,	0.0,	20	0.0,	0.0,	0.0,	0.0,	0.0,
21	0.0,	0.0,	0.0,	0.0,	0.0,	22	0.0,	0.0,	0.0,	0.0,	0.0,
23	0.0,	0.0,	0.0,	0.0,	0.0,	24	0.0,	0.0,	0.0,	0.0,	0.0,
25	0.0,	0.0,	0.0,	0.0,	0.0,	26	7.6,	140.5,	105.2,	-16.0,	-71.5,
27	7.6,	139.1,	90.5,	2.4,	-66.2,	28	0.0,	0.0,	0.0,	0.0,	0.0,
29	0.0,	0.0,	0.0,	0.0,	0.0,	30	0.0,	0.0,	0.0,	0.0,	0.0,
31	7.6,	143.6,	124.8,	14.4,	-18.4,	32	7.6,	140.1,	133.8,	11.6,	-4.4,
33	7.6,	132.4,	139.5,	8.3,	9.7,	34	7.6,	120.6,	141.0,	4.9,	23.5,
35	7.6,	105.2,	140.5,	1.2,	36.6,	36	7.6,	90.5,	139.1,	-3.4,	47.6,

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

SOURCE ID = L0000035 to L0000051 ; 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	.0000E+00
9	.9330E+00	10	.9110E+00	11	.9220E+00	12	.9390E+00	13	.9560E+00	14	.9770E+00	15	.9460E+00	16	.9310E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

SOURCE ID = L0000052 to L0000068 ; 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	.0000E+00
9	.9220E+00	10	.8650E+00	11	.8670E+00	12	.8830E+00	13	.9170E+00	14	.9500E+00	15	.9320E+00	16	.9230E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

SOURCE ID = 2_spill ; 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	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	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

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

SOURCE ID = 2_refuel ; 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	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	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

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

SOURCE ID = 3a_spill ; 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	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	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

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

SOURCE ID = 3a_fuell ; 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	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	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

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

SOURCE ID = 2_vent ; SOURCE TYPE = POINT :

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	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	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

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

SOURCE ID = 3a_vent ; SOURCE TYPE = POINT :

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	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	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 URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = 3b ; SOURCE TYPE = POINT :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = MONDAY															
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 = TUESDAY															
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	.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 = WEDNESDY															
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 = THURSDAY															
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	.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 = FRIDAY															
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 = 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

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

(413398.8,	3762084.6,	128.0,	128.0,	0.0);	(413408.8,	3762084.6,	127.9,	127.9,	0.0);
(413418.8,	3762084.6,	127.8,	127.8,	0.0);	(413428.8,	3762084.6,	127.8,	127.8,	0.0);
(413438.8,	3762084.6,	127.7,	127.7,	0.0);	(413448.8,	3762084.6,	127.6,	127.6,	0.0);
(413458.8,	3762084.6,	127.6,	127.6,	0.0);	(413328.8,	3762094.6,	128.4,	128.4,	0.0);
(413338.8,	3762094.6,	128.4,	128.4,	0.0);	(413348.8,	3762094.6,	128.4,	128.4,	0.0);
(413358.8,	3762094.6,	128.3,	128.3,	0.0);	(413368.8,	3762094.6,	128.2,	128.2,	0.0);
(413378.8,	3762094.6,	128.1,	128.1,	0.0);	(413388.8,	3762094.6,	128.0,	128.0,	0.0);
(413398.8,	3762094.6,	128.0,	128.0,	0.0);	(413408.8,	3762094.6,	127.9,	127.9,	0.0);
(413418.8,	3762094.6,	127.9,	127.9,	0.0);	(413428.8,	3762094.6,	127.8,	127.8,	0.0);
(413438.8,	3762094.6,	127.8,	127.8,	0.0);	(413448.8,	3762094.6,	127.7,	127.7,	0.0);
(413458.8,	3762094.6,	127.7,	127.7,	0.0);	(413468.8,	3762094.6,	127.8,	127.8,	0.0);
(413478.8,	3762094.6,	127.9,	127.9,	0.0);	(413488.8,	3762094.6,	127.9,	127.9,	0.0);
(413298.8,	3762104.6,	129.0,	129.0,	0.0);	(413308.8,	3762104.6,	128.8,	128.8,	0.0);
(413318.8,	3762104.6,	128.6,	128.6,	0.0);	(413328.8,	3762104.6,	128.4,	128.4,	0.0);
(413338.8,	3762104.6,	128.4,	128.4,	0.0);	(413348.8,	3762104.6,	128.4,	128.4,	0.0);
(413358.8,	3762104.6,	128.3,	128.3,	0.0);	(413368.8,	3762104.6,	128.2,	128.2,	0.0);
(413378.8,	3762104.6,	128.1,	128.1,	0.0);	(413388.8,	3762104.6,	128.0,	128.0,	0.0);
(413398.8,	3762104.6,	128.0,	128.0,	0.0);	(413408.8,	3762104.6,	127.9,	127.9,	0.0);
(413418.8,	3762104.6,	127.9,	127.9,	0.0);	(413428.8,	3762104.6,	127.8,	127.8,	0.0);
(413438.8,	3762104.6,	127.8,	127.8,	0.0);	(413448.8,	3762104.6,	127.8,	127.8,	0.0);
(413458.8,	3762104.6,	127.8,	127.8,	0.0);	(413468.8,	3762104.6,	127.8,	127.8,	0.0);
(413478.8,	3762104.6,	127.8,	127.8,	0.0);	(413488.8,	3762104.6,	127.7,	127.7,	0.0);
(413278.8,	3762114.6,	128.9,	128.9,	0.0);	(413288.8,	3762114.6,	128.8,	128.8,	0.0);
(413298.8,	3762114.6,	128.8,	128.8,	0.0);	(413308.8,	3762114.6,	128.7,	128.7,	0.0);
(413318.8,	3762114.6,	128.5,	128.5,	0.0);	(413328.8,	3762114.6,	128.3,	128.3,	0.0);
(413338.8,	3762114.6,	128.3,	128.3,	0.0);	(413348.8,	3762114.6,	128.3,	128.3,	0.0);
(413358.8,	3762114.6,	128.2,	128.2,	0.0);	(413368.8,	3762114.6,	128.0,	128.0,	0.0);
(413378.8,	3762114.6,	127.9,	127.9,	0.0);	(413388.8,	3762114.6,	127.8,	127.8,	0.0);
(413398.8,	3762114.6,	127.8,	127.8,	0.0);	(413408.8,	3762114.6,	127.8,	127.8,	0.0);
(413418.8,	3762114.6,	127.7,	127.7,	0.0);	(413428.8,	3762114.6,	127.7,	127.7,	0.0);
(413438.8,	3762114.6,	127.7,	127.7,	0.0);	(413448.8,	3762114.6,	127.7,	127.7,	0.0);
(413458.8,	3762114.6,	127.7,	127.7,	0.0);	(413468.8,	3762114.6,	127.7,	127.7,	0.0);
(413478.8,	3762114.6,	127.6,	127.6,	0.0);	(413488.8,	3762114.6,	127.5,	127.5,	0.0);
(413268.8,	3762124.6,	128.8,	128.8,	0.0);	(413278.8,	3762124.6,	128.7,	128.7,	0.0);
(413288.8,	3762124.6,	128.6,	128.6,	0.0);	(413298.8,	3762124.6,	128.6,	128.6,	0.0);
(413308.8,	3762124.6,	128.5,	128.5,	0.0);	(413318.8,	3762124.6,	128.3,	128.3,	0.0);
(413328.8,	3762124.6,	128.2,	128.2,	0.0);	(413338.8,	3762124.6,	128.2,	128.2,	0.0);
(413348.8,	3762124.6,	128.1,	128.1,	0.0);	(413358.8,	3762124.6,	128.1,	128.1,	0.0);
(413368.8,	3762124.6,	127.9,	127.9,	0.0);	(413378.8,	3762124.6,	127.7,	127.7,	0.0);
(413388.8,	3762124.6,	127.6,	127.6,	0.0);	(413398.8,	3762124.6,	127.6,	127.6,	0.0);
(413408.8,	3762124.6,	127.6,	127.6,	0.0);	(413418.8,	3762124.6,	127.5,	127.5,	0.0);
(413428.8,	3762124.6,	127.5,	127.5,	0.0);	(413438.8,	3762124.6,	127.5,	127.5,	0.0);

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( 413448.8, 3762124.6,     127.6,     127.6,       0.0);
( 413468.8, 3762124.6,     127.5,     127.5,       0.0);
( 413488.8, 3762124.6,     127.4,     127.4,       0.0);
( 413248.8, 3762134.6,     128.9,     128.9,       0.0);
( 413268.8, 3762134.6,     128.6,     128.6,       0.0);
( 413288.8, 3762134.6,     128.4,     128.4,       0.0);
( 413308.8, 3762134.6,     128.3,     128.3,       0.0);
( 413328.8, 3762134.6,     128.1,     128.1,       0.0);
( 413348.8, 3762134.6,     128.0,     128.0,       0.0);
( 413368.8, 3762134.6,     127.7,     127.7,       0.0);
( 413388.8, 3762134.6,     127.5,     127.5,       0.0);
( 413408.8, 3762134.6,     127.4,     127.4,       0.0);
( 413428.8, 3762134.6,     127.4,     127.4,       0.0);
( 413448.8, 3762134.6,     127.4,     127.4,       0.0);
( 413468.8, 3762134.6,     127.4,     127.4,       0.0);
( 413488.8, 3762134.6,     127.2,     127.2,       0.0);
( 413238.8, 3762144.6,     128.8,     128.8,       0.0);
( 413258.8, 3762144.6,     128.6,     128.6,       0.0);
( 413278.8, 3762144.6,     128.3,     128.3,       0.0);
( 413298.8, 3762144.6,     128.1,     128.1,       0.0);
( 413318.8, 3762144.6,     128.1,     128.1,       0.0);
( 413338.8, 3762144.6,     127.9,     127.9,       0.0);
( 413358.8, 3762144.6,     127.7,     127.7,       0.0);
( 413378.8, 3762144.6,     127.3,     127.3,       0.0);
( 413398.8, 3762144.6,     127.3,     127.3,       0.0);
( 413418.8, 3762144.6,     127.2,     127.2,       0.0);
( 413438.8, 3762144.6,     127.2,     127.2,       0.0);
( 413458.8, 3762144.6,     127.3,     127.3,       0.0);
( 413478.8, 3762144.6,     127.1,     127.1,       0.0);
( 413218.8, 3762154.6,     128.7,     128.7,       0.0);
( 413238.8, 3762154.6,     128.6,     128.6,       0.0);
( 413258.8, 3762154.6,     128.4,     128.4,       0.0);
( 413278.8, 3762154.6,     128.1,     128.1,       0.0);
( 413298.8, 3762154.6,     128.0,     128.0,       0.0);
( 413318.8, 3762154.6,     127.9,     127.9,       0.0);
( 413338.8, 3762154.6,     127.8,     127.8,       0.0);
( 413358.8, 3762154.6,     127.4,     127.4,       0.0);
( 413378.8, 3762154.6,     127.2,     127.2,       0.0);
( 413398.8, 3762154.6,     127.1,     127.1,       0.0);
( 413418.8, 3762154.6,     127.1,     127.1,       0.0);
( 413438.8, 3762154.6,     127.0,     127.0,       0.0);
( 413458.8, 3762154.6,     127.1,     127.1,       0.0);
( 413478.8, 3762154.6,     127.0,     127.0,       0.0);
( 413218.8, 3762164.6,     128.5,     128.5,       0.0);
( 413238.8, 3762164.6,     128.5,     128.5,       0.0);
( 413258.8, 3762164.6,     128.2,     128.2,       0.0);
( 413278.8, 3762164.6,     127.9,     127.9,       0.0);
( 413298.8, 3762164.6,     127.8,     127.8,       0.0);
( 413458.8, 3762124.6,     127.6,     127.6,       0.0);
( 413478.8, 3762124.6,     127.5,     127.5,       0.0);
( 413238.8, 3762134.6,     129.0,     129.0,       0.0);
( 413258.8, 3762134.6,     128.7,     128.7,       0.0);
( 413278.8, 3762134.6,     128.5,     128.5,       0.0);
( 413298.8, 3762134.6,     128.3,     128.3,       0.0);
( 413318.8, 3762134.6,     128.2,     128.2,       0.0);
( 413338.8, 3762134.6,     128.1,     128.1,       0.0);
( 413358.8, 3762134.6,     127.9,     127.9,       0.0);
( 413378.8, 3762134.6,     127.5,     127.5,       0.0);
( 413398.8, 3762134.6,     127.4,     127.4,       0.0);
( 413418.8, 3762134.6,     127.4,     127.4,       0.0);
( 413438.8, 3762134.6,     127.4,     127.4,       0.0);
( 413458.8, 3762134.6,     127.5,     127.5,       0.0);
( 413478.8, 3762134.6,     127.3,     127.3,       0.0);
( 413228.8, 3762144.6,     128.9,     128.9,       0.0);
( 413248.8, 3762144.6,     128.7,     128.7,       0.0);
( 413268.8, 3762144.6,     128.4,     128.4,       0.0);
( 413288.8, 3762144.6,     128.2,     128.2,       0.0);
( 413308.8, 3762144.6,     128.1,     128.1,       0.0);
( 413328.8, 3762144.6,     128.0,     128.0,       0.0);
( 413348.8, 3762144.6,     127.8,     127.8,       0.0);
( 413368.8, 3762144.6,     127.5,     127.5,       0.0);
( 413388.8, 3762144.6,     127.3,     127.3,       0.0);
( 413408.8, 3762144.6,     127.2,     127.2,       0.0);
( 413428.8, 3762144.6,     127.2,     127.2,       0.0);
( 413448.8, 3762144.6,     127.2,     127.2,       0.0);
( 413468.8, 3762144.6,     127.2,     127.2,       0.0);
( 413488.8, 3762144.6,     127.1,     127.1,       0.0);
( 413228.8, 3762154.6,     128.8,     128.8,       0.0);
( 413248.8, 3762154.6,     128.5,     128.5,       0.0);
( 413268.8, 3762154.6,     128.2,     128.2,       0.0);
( 413288.8, 3762154.6,     128.0,     128.0,       0.0);
( 413308.8, 3762154.6,     127.9,     127.9,       0.0);
( 413328.8, 3762154.6,     128.0,     128.0,       0.0);
( 413348.8, 3762154.6,     127.6,     127.6,       0.0);
( 413368.8, 3762154.6,     127.3,     127.3,       0.0);
( 413388.8, 3762154.6,     127.1,     127.1,       0.0);
( 413408.8, 3762154.6,     127.1,     127.1,       0.0);
( 413428.8, 3762154.6,     127.0,     127.0,       0.0);
( 413448.8, 3762154.6,     127.1,     127.1,       0.0);
( 413468.8, 3762154.6,     127.0,     127.0,       0.0);
( 413208.8, 3762164.6,     128.3,     128.3,       0.0);
( 413228.8, 3762164.6,     128.7,     128.7,       0.0);
( 413248.8, 3762164.6,     128.3,     128.3,       0.0);
( 413268.8, 3762164.6,     128.1,     128.1,       0.0);
( 413288.8, 3762164.6,     127.8,     127.8,       0.0);
( 413308.8, 3762164.6,     127.8,     127.8,       0.0);
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

(413318.8,	3762164.6,	127.8,	127.8,	0.0);	(413328.8,	3762164.6,	127.9,	127.9,	0.0);
(413338.8,	3762164.6,	127.6,	127.6,	0.0);	(413348.8,	3762164.6,	127.3,	127.3,	0.0);
(413358.8,	3762164.6,	127.1,	127.1,	0.0);	(413368.8,	3762164.6,	127.1,	127.1,	0.0);
(413378.8,	3762164.6,	127.0,	127.0,	0.0);	(413388.8,	3762164.6,	127.0,	127.0,	0.0);
(413398.8,	3762164.6,	127.0,	127.0,	0.0);	(413408.8,	3762164.6,	126.9,	126.9,	0.0);
(413418.8,	3762164.6,	126.9,	126.9,	0.0);	(413428.8,	3762164.6,	126.9,	126.9,	0.0);
(413438.8,	3762164.6,	126.9,	126.9,	0.0);	(413448.8,	3762164.6,	126.9,	126.9,	0.0);
(413458.8,	3762164.6,	126.9,	126.9,	0.0);	(413468.8,	3762164.6,	126.8,	126.8,	0.0);
(413478.8,	3762164.6,	126.8,	126.8,	0.0);	(413198.8,	3762174.6,	128.0,	128.0,	0.0);
(413208.8,	3762174.6,	128.1,	128.1,	0.0);	(413218.8,	3762174.6,	128.3,	128.3,	0.0);
(413228.8,	3762174.6,	128.4,	128.4,	0.0);	(413238.8,	3762174.6,	128.2,	128.2,	0.0);
(413248.8,	3762174.6,	128.1,	128.1,	0.0);	(413258.8,	3762174.6,	128.0,	128.0,	0.0);
(413268.8,	3762174.6,	127.8,	127.8,	0.0);	(413278.8,	3762174.6,	127.7,	127.7,	0.0);
(413288.8,	3762174.6,	127.6,	127.6,	0.0);	(413298.8,	3762174.6,	127.6,	127.6,	0.0);
(413308.8,	3762174.6,	127.5,	127.5,	0.0);	(413318.8,	3762174.6,	127.6,	127.6,	0.0);
(413328.8,	3762174.6,	127.6,	127.6,	0.0);	(413338.8,	3762174.6,	127.4,	127.4,	0.0);
(413348.8,	3762174.6,	127.2,	127.2,	0.0);	(413358.8,	3762174.6,	127.0,	127.0,	0.0);
(413368.8,	3762174.6,	126.9,	126.9,	0.0);	(413378.8,	3762174.6,	126.9,	126.9,	0.0);
(413388.8,	3762174.6,	126.8,	126.8,	0.0);	(413398.8,	3762174.6,	126.7,	126.7,	0.0);
(413408.8,	3762174.6,	126.6,	126.6,	0.0);	(413418.8,	3762174.6,	126.6,	126.6,	0.0);
(413428.8,	3762174.6,	126.6,	126.6,	0.0);	(413438.8,	3762174.6,	126.6,	126.6,	0.0);
(413448.8,	3762174.6,	126.5,	126.5,	0.0);	(413458.8,	3762174.6,	126.5,	126.5,	0.0);
(413468.8,	3762174.6,	126.6,	126.6,	0.0);	(413478.8,	3762174.6,	126.6,	126.6,	0.0);
(413208.8,	3762184.6,	127.9,	127.9,	0.0);	(413218.8,	3762184.6,	128.0,	128.0,	0.0);
(413228.8,	3762184.6,	128.0,	128.0,	0.0);	(413238.8,	3762184.6,	128.0,	128.0,	0.0);
(413248.8,	3762184.6,	127.9,	127.9,	0.0);	(413258.8,	3762184.6,	127.8,	127.8,	0.0);
(413268.8,	3762184.6,	127.7,	127.7,	0.0);	(413278.8,	3762184.6,	127.5,	127.5,	0.0);
(413288.8,	3762184.6,	127.4,	127.4,	0.0);	(413298.8,	3762184.6,	127.3,	127.3,	0.0);
(413308.8,	3762184.6,	127.3,	127.3,	0.0);	(413318.8,	3762184.6,	127.3,	127.3,	0.0);
(413328.8,	3762184.6,	127.3,	127.3,	0.0);	(413338.8,	3762184.6,	127.2,	127.2,	0.0);
(413348.8,	3762184.6,	127.1,	127.1,	0.0);	(413358.8,	3762184.6,	127.0,	127.0,	0.0);
(413368.8,	3762184.6,	126.8,	126.8,	0.0);	(413378.8,	3762184.6,	126.7,	126.7,	0.0);
(413388.8,	3762184.6,	126.5,	126.5,	0.0);	(413398.8,	3762184.6,	126.4,	126.4,	0.0);
(413408.8,	3762184.6,	126.2,	126.2,	0.0);	(413418.8,	3762184.6,	126.2,	126.2,	0.0);
(413428.8,	3762184.6,	126.2,	126.2,	0.0);	(413438.8,	3762184.6,	126.2,	126.2,	0.0);
(413448.8,	3762184.6,	126.2,	126.2,	0.0);	(413458.8,	3762184.6,	126.2,	126.2,	0.0);
(413468.8,	3762184.6,	126.3,	126.3,	0.0);	(413478.8,	3762184.6,	126.4,	126.4,	0.0);
(413208.8,	3762194.6,	127.7,	127.7,	0.0);	(413218.8,	3762194.6,	127.7,	127.7,	0.0);
(413228.8,	3762194.6,	127.6,	127.6,	0.0);	(413238.8,	3762194.6,	127.7,	127.7,	0.0);
(413248.8,	3762194.6,	127.7,	127.7,	0.0);	(413258.8,	3762194.6,	127.6,	127.6,	0.0);
(413268.8,	3762194.6,	127.5,	127.5,	0.0);	(413278.8,	3762194.6,	127.3,	127.3,	0.0);
(413288.8,	3762194.6,	127.2,	127.2,	0.0);	(413298.8,	3762194.6,	127.1,	127.1,	0.0);

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( 413308.8, 3762194.6,     127.1,     127.1,       0.0);
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( 413368.8, 3762214.6,     126.1,     126.1,       0.0);
( 413388.8, 3762214.6,     125.9,     125.9,       0.0);
( 413408.8, 3762214.6,     125.7,     125.7,       0.0);
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( 413278.8, 3762224.6,     126.8,     126.8,       0.0);
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( 413358.8, 3762224.6,     125.9,     125.9,       0.0);
( 413378.8, 3762224.6,     125.8,     125.8,       0.0);
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( 413418.8, 3762224.6,     125.7,     125.7,       0.0);
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( 413238.8, 3762234.6,     126.9,     126.9,       0.0);
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Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

(413248.8,	3762234.6,	126.9,	126.9,	0.0);	(413258.8,	3762234.6,	126.9,	126.9,	0.0);
(413268.8,	3762234.6,	126.7,	126.7,	0.0);	(413278.8,	3762234.6,	126.6,	126.6,	0.0);
(413288.8,	3762234.6,	126.4,	126.4,	0.0);	(413298.8,	3762234.6,	126.3,	126.3,	0.0);
(413308.8,	3762234.6,	126.1,	126.1,	0.0);	(413318.8,	3762234.6,	126.0,	126.0,	0.0);
(413328.8,	3762234.6,	125.8,	125.8,	0.0);	(413338.8,	3762234.6,	125.8,	125.8,	0.0);
(413348.8,	3762234.6,	125.7,	125.7,	0.0);	(413358.8,	3762234.6,	125.7,	125.7,	0.0);
(413368.8,	3762234.6,	125.7,	125.7,	0.0);	(413378.8,	3762234.6,	125.7,	125.7,	0.0);
(413388.8,	3762234.6,	125.7,	125.7,	0.0);	(413398.8,	3762234.6,	125.7,	125.7,	0.0);
(413408.8,	3762234.6,	125.7,	125.7,	0.0);	(413418.8,	3762234.6,	125.7,	125.7,	0.0);
(413428.8,	3762234.6,	125.7,	125.7,	0.0);	(413438.8,	3762234.6,	125.7,	125.7,	0.0);
(413448.8,	3762234.6,	125.6,	125.6,	0.0);	(413458.8,	3762234.6,	125.5,	125.5,	0.0);
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(413288.8,	3762244.6,	126.3,	126.3,	0.0);	(413298.8,	3762244.6,	126.1,	126.1,	0.0);
(413308.8,	3762244.6,	126.0,	126.0,	0.0);	(413318.8,	3762244.6,	125.8,	125.8,	0.0);
(413328.8,	3762244.6,	125.7,	125.7,	0.0);	(413338.8,	3762244.6,	125.7,	125.7,	0.0);
(413348.8,	3762244.6,	125.7,	125.7,	0.0);	(413358.8,	3762244.6,	125.7,	125.7,	0.0);
(413368.8,	3762244.6,	125.7,	125.7,	0.0);	(413378.8,	3762244.6,	125.7,	125.7,	0.0);
(413388.8,	3762244.6,	125.6,	125.6,	0.0);	(413398.8,	3762244.6,	125.6,	125.6,	0.0);
(413408.8,	3762244.6,	125.6,	125.6,	0.0);	(413418.8,	3762244.6,	125.7,	125.7,	0.0);
(413428.8,	3762244.6,	125.7,	125.7,	0.0);	(413438.8,	3762244.6,	125.7,	125.7,	0.0);
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(413378.8,	3762254.6,	125.7,	125.7,	0.0);	(413388.8,	3762254.6,	125.6,	125.6,	0.0);
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(413458.8,	3762254.6,	125.5,	125.5,	0.0);	(413248.8,	3762264.6,	126.5,	126.5,	0.0);
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(413278.8,	3762264.6,	126.2,	126.2,	0.0);	(413288.8,	3762264.6,	126.0,	126.0,	0.0);
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(413358.8,	3762264.6,	125.7,	125.7,	0.0);	(413368.8,	3762264.6,	125.7,	125.7,	0.0);
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*** AERMOD - VERSION  18081 ***   *** Wedgeworth Elementary School                                                ***        11/05/18
*** AERMET - VERSION  16216 ***   *** HRA, Hacienda Heights                                                       ***        12:43:38
                                                                                                                             PAGE  54
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                                  *** 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 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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*** AERMOD - VERSION 18081 *** *** Wedgeworth Elementary School *** 11/05/18
*** AERMET - VERSION 16216 *** *** HRA, Hacienda Heights *** 12:43:38
PAGE 55

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

Surface file: ..\met data\AZUS_v9.SFC Met Version: 16216
Profile file: ..\met data\AZUS_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3179 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2012 Year: 2012

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
12	01	01	1	01	-21.3	0.224	-9.000	-9.000	-999.	255.	55.3	0.36	1.68	1.00	1.80	20.	9.1	293.1	5.5
12	01	01	1	02	-32.6	0.342	-9.000	-9.000	-999.	481.	128.9	0.36	1.68	1.00	2.70	99.	9.1	293.1	5.5
12	01	01	1	03	-26.4	0.277	-9.000	-9.000	-999.	351.	84.1	0.36	1.68	1.00	2.20	14.	9.1	292.0	5.5
12	01	01	1	04	-32.6	0.342	-9.000	-9.000	-999.	480.	128.9	0.36	1.68	1.00	2.70	10.	9.1	292.5	5.5
12	01	01	1	05	-26.4	0.277	-9.000	-9.000	-999.	351.	84.1	0.36	1.68	1.00	2.20	12.	9.1	292.5	5.5
12	01	01	1	06	-21.6	0.224	-9.000	-9.000	-999.	256.	55.2	0.36	1.68	1.00	1.80	118.	9.1	289.2	5.5
12	01	01	1	07	-26.6	0.277	-9.000	-9.000	-999.	349.	84.1	0.36	1.68	1.00	2.20	64.	9.1	290.9	5.5
12	01	01	1	08	-1.3	0.062	-9.000	-9.000	-999.	124.	16.5	0.36	1.68	0.55	0.40	36.	9.1	290.9	5.5
12	01	01	1	09	38.1	0.160	0.348	0.008	39.	153.	-9.5	0.36	1.68	0.32	0.90	124.	9.1	293.8	5.5
12	01	01	1	10	99.5	0.179	0.693	0.007	119.	181.	-5.1	0.36	1.68	0.25	0.90	21.	9.1	298.1	5.5
12	01	01	1	11	142.6	0.494	1.086	0.005	321.	832.	-75.2	0.36	1.68	0.22	3.60	141.	9.1	299.9	5.5
12	01	01	1	12	162.8	0.442	1.385	0.005	582.	709.	-47.3	0.36	1.68	0.21	3.10	122.	9.1	299.9	5.5
12	01	01	1	13	164.4	0.298	1.634	0.005	946.	405.	-14.3	0.36	1.68	0.21	1.80	114.	9.1	300.9	5.5
12	01	01	1	14	142.7	0.293	1.718	0.005	1265.	382.	-15.8	0.36	1.68	0.22	1.80	93.	9.1	302.5	5.5
12	01	01	1	15	96.7	0.283	1.575	0.005	1438.	361.	-20.7	0.36	1.68	0.26	1.80	110.	9.1	303.8	5.5
12	01	01	1	16	41.5	0.207	1.201	0.005	1485.	228.	-18.9	0.36	1.68	0.35	1.30	113.	9.1	304.2	5.5
12	01	01	1	17	-37.8	0.464	-9.000	-9.000	-999.	757.	236.3	0.36	1.68	0.62	3.60	251.	9.1	300.9	5.5
12	01	01	1	18	-26.1	0.277	-9.000	-9.000	-999.	379.	84.2	0.36	1.68	1.00	2.20	8.	9.1	296.4	5.5
12	01	01	1	19	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.36	1.68	1.00	999.00	999.	-9.0	295.9	5.5
12	01	01	1	20	-5.7	0.107	-9.000	-9.000	-999.	84.	19.3	0.36	1.68	1.00	0.90	35.	9.1	295.4	5.5
12	01	01	1	21	-21.3	0.224	-9.000	-9.000	-999.	255.	55.3	0.36	1.68	1.00	1.80	213.	9.1	293.8	5.5
12	01	01	1	22	-21.3	0.224	-9.000	-9.000	-999.	255.	55.3	0.36	1.68	1.00	1.80	52.	9.1	293.8	5.5
12	01	01	1	23	-26.3	0.277	-9.000	-9.000	-999.	349.	84.2	0.36	1.68	1.00	2.20	58.	9.1	293.8	5.5
12	01	01	1	24	-21.4	0.224	-9.000	-9.000	-999.	256.	55.3	0.36	1.68	1.00	1.80	83.	9.1	292.5	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	5.5	0	-999.	-99.00	293.2	99.0	-99.00	-99.00
12	01	01	01	9.1	1	20.	1.80	-999.0	99.0	-99.00	-99.00

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

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

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

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
CARS	1ST HIGHEST VALUE IS	1.99495 AT	(413438.80, 3762304.65, 125.42, 125.42, 0.00)	DC	
	2ND HIGHEST VALUE IS	1.87637 AT	(413428.80, 3762304.65, 125.45, 125.45, 0.00)	DC	
	3RD HIGHEST VALUE IS	1.79791 AT	(413448.80, 3762294.65, 125.47, 125.47, 0.00)	DC	
	4TH HIGHEST VALUE IS	1.76526 AT	(413418.80, 3762304.65, 125.53, 125.53, 0.00)	DC	
	5TH HIGHEST VALUE IS	1.69860 AT	(413438.80, 3762294.65, 125.48, 125.48, 0.00)	DC	
	6TH HIGHEST VALUE IS	1.66406 AT	(413408.80, 3762304.65, 125.61, 125.61, 0.00)	DC	
	7TH HIGHEST VALUE IS	1.63045 AT	(413458.80, 3762284.65, 125.47, 125.47, 0.00)	DC	
	8TH HIGHEST VALUE IS	1.60539 AT	(413428.80, 3762294.65, 125.53, 125.53, 0.00)	DC	
	9TH HIGHEST VALUE IS	1.57327 AT	(413398.80, 3762304.65, 125.66, 125.66, 0.00)	DC	
	10TH HIGHEST VALUE IS	1.54401 AT	(413448.80, 3762284.65, 125.51, 125.51, 0.00)	DC	
2_refuel	1ST HIGHEST VALUE IS	0.64987 AT	(413438.80, 3762304.65, 125.42, 125.42, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.62815 AT	(413448.80, 3762294.65, 125.47, 125.47, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.61602 AT	(413428.80, 3762304.65, 125.45, 125.45, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.60258 AT	(413458.80, 3762284.65, 125.47, 125.47, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.59928 AT	(413438.80, 3762294.65, 125.48, 125.48, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.58244 AT	(413418.80, 3762304.65, 125.53, 125.53, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.57826 AT	(413448.80, 3762284.65, 125.51, 125.51, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.57008 AT	(413428.80, 3762294.65, 125.53, 125.53, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.55418 AT	(413458.80, 3762274.65, 125.48, 125.48, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.55341 AT	(413438.80, 3762284.65, 125.55, 125.55, 0.00)	DC	
3a_fuell	1ST HIGHEST VALUE IS	0.41810 AT	(413458.80, 3762284.65, 125.47, 125.47, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.40668 AT	(413458.80, 3762274.65, 125.48, 125.48, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.39821 AT	(413468.80, 3762244.65, 125.49, 125.49, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.39690 AT	(413448.80, 3762294.65, 125.47, 125.47, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.39490 AT	(413458.80, 3762264.65, 125.49, 125.49, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.38715 AT	(413448.80, 3762284.65, 125.51, 125.51, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.38428 AT	(413468.80, 3762234.65, 125.50, 125.50, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.38286 AT	(413458.80, 3762254.65, 125.50, 125.50, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.37699 AT	(413448.80, 3762274.65, 125.55, 125.55, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.37621 AT	(413438.80, 3762304.65, 125.42, 125.42, 0.00)	DC	
3b	1ST HIGHEST VALUE IS	0.02389 AT	(413458.80, 3762284.65, 125.47, 125.47, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.02366 AT	(413448.80, 3762294.65, 125.47, 125.47, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.02364 AT	(413458.80, 3762274.65, 125.48, 125.48, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.02342 AT	(413438.80, 3762304.65, 125.42, 125.42, 0.00)	DC	

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          5TH HIGHEST VALUE IS       0.02341 AT (  413448.80,  3762284.65,   125.51,   125.51,    0.00)  DC
          6TH HIGHEST VALUE IS       0.02338 AT (  413458.80,  3762264.65,   125.49,   125.49,    0.00)  DC
          7TH HIGHEST VALUE IS       0.02326 AT (  413468.80,  3762244.65,   125.49,   125.49,    0.00)  DC
          8TH HIGHEST VALUE IS       0.02318 AT (  413438.80,  3762294.65,   125.48,   125.48,    0.00)  DC
          9TH HIGHEST VALUE IS       0.02315 AT (  413448.80,  3762274.65,   125.55,   125.55,    0.00)  DC
         10TH HIGHEST VALUE IS       0.02310 AT (  413458.80,  3762254.65,   125.50,   125.50,    0.00)  DC

 *** AERMOD - VERSION  18081 ***   *** Wedgeworth Elementary School                                   ***        11/05/18
 *** AERMET - VERSION  16216 ***   *** HRA, Hacienda Heights                                          ***        12:43:38
                                                                                                               PAGE 246
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                    *** THE SUMMARY OF MAXIMUM PERIOD ( 43848 HRS) RESULTS ***
                                  ** CONC OF OTHER    IN MICROGRAMS/M**3                          **

                                                                                                      NETWORK
GROUP ID                        AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

2_spill   1ST HIGHEST VALUE IS       0.65319 AT (  413438.80,  3762304.65,   125.42,   125.42,    0.00)  DC
          2ND HIGHEST VALUE IS       0.63203 AT (  413448.80,  3762294.65,   125.47,   125.47,    0.00)  DC
          3RD HIGHEST VALUE IS       0.61871 AT (  413428.80,  3762304.65,   125.45,   125.45,    0.00)  DC
          4TH HIGHEST VALUE IS       0.60652 AT (  413458.80,  3762284.65,   125.47,   125.47,    0.00)  DC
          5TH HIGHEST VALUE IS       0.60273 AT (  413438.80,  3762294.65,   125.48,   125.48,    0.00)  DC
          6TH HIGHEST VALUE IS       0.58446 AT (  413418.80,  3762304.65,   125.53,   125.53,    0.00)  DC
          7TH HIGHEST VALUE IS       0.58206 AT (  413448.80,  3762284.65,   125.51,   125.51,    0.00)  DC
          8TH HIGHEST VALUE IS       0.57300 AT (  413428.80,  3762294.65,   125.53,   125.53,    0.00)  DC
          9TH HIGHEST VALUE IS       0.55787 AT (  413458.80,  3762274.65,   125.48,   125.48,    0.00)  DC
         10TH HIGHEST VALUE IS       0.55691 AT (  413438.80,  3762284.65,   125.55,   125.55,    0.00)  DC

3a_spill  1ST HIGHEST VALUE IS       0.41560 AT (  413458.80,  3762284.65,   125.47,   125.47,    0.00)  DC
          2ND HIGHEST VALUE IS       0.40424 AT (  413458.80,  3762274.65,   125.48,   125.48,    0.00)  DC
          3RD HIGHEST VALUE IS       0.39599 AT (  413468.80,  3762244.65,   125.49,   125.49,    0.00)  DC
          4TH HIGHEST VALUE IS       0.39459 AT (  413448.80,  3762294.65,   125.47,   125.47,    0.00)  DC
          5TH HIGHEST VALUE IS       0.39255 AT (  413458.80,  3762264.65,   125.49,   125.49,    0.00)  DC
          6TH HIGHEST VALUE IS       0.38485 AT (  413448.80,  3762284.65,   125.51,   125.51,    0.00)  DC
          7TH HIGHEST VALUE IS       0.38222 AT (  413468.80,  3762234.65,   125.50,   125.50,    0.00)  DC
          8TH HIGHEST VALUE IS       0.38063 AT (  413458.80,  3762254.65,   125.50,   125.50,    0.00)  DC
          9TH HIGHEST VALUE IS       0.37472 AT (  413448.80,  3762274.65,   125.55,   125.55,    0.00)  DC
         10TH HIGHEST VALUE IS       0.37415 AT (  413438.80,  3762304.65,   125.42,   125.42,    0.00)  DC

2_vent    1ST HIGHEST VALUE IS       0.59074 AT (  413438.80,  3762304.65,   125.42,   125.42,    0.00)  DC
          2ND HIGHEST VALUE IS       0.57041 AT (  413448.80,  3762294.65,   125.47,   125.47,    0.00)  DC
          3RD HIGHEST VALUE IS       0.56190 AT (  413428.80,  3762304.65,   125.45,   125.45,    0.00)  DC
          4TH HIGHEST VALUE IS       0.54730 AT (  413458.80,  3762284.65,   125.47,   125.47,    0.00)  DC
          5TH HIGHEST VALUE IS       0.54568 AT (  413438.80,  3762294.65,   125.48,   125.48,    0.00)  DC
          6TH HIGHEST VALUE IS       0.53321 AT (  413418.80,  3762304.65,   125.53,   125.53,    0.00)  DC
          7TH HIGHEST VALUE IS       0.52622 AT (  413448.80,  3762284.65,   125.51,   125.51,    0.00)  DC
          8TH HIGHEST VALUE IS       0.52067 AT (  413428.80,  3762294.65,   125.53,   125.53,    0.00)  DC
          9TH HIGHEST VALUE IS       0.50529 AT (  413408.80,  3762304.65,   125.61,   125.61,    0.00)  DC
         10TH HIGHEST VALUE IS       0.50478 AT (  413438.80,  3762284.65,   125.55,   125.55,    0.00)  DC
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3a_vent   1ST HIGHEST VALUE IS       0.43616 AT (  413458.80,  3762284.65,   125.47,   125.47,    0.00)  DC
          2ND HIGHEST VALUE IS       0.42143 AT (  413448.80,  3762294.65,   125.47,   125.47,    0.00)  DC
          3RD HIGHEST VALUE IS       0.41829 AT (  413458.80,  3762274.65,   125.48,   125.48,    0.00)  DC
          4TH HIGHEST VALUE IS       0.40616 AT (  413438.80,  3762304.65,   125.42,   125.42,    0.00)  DC
          5TH HIGHEST VALUE IS       0.40559 AT (  413448.80,  3762284.65,   125.51,   125.51,    0.00)  DC
          6TH HIGHEST VALUE IS       0.40061 AT (  413458.80,  3762264.65,   125.49,   125.49,    0.00)  DC
          7TH HIGHEST VALUE IS       0.39230 AT (  413438.80,  3762294.65,   125.48,   125.48,    0.00)  DC
          8TH HIGHEST VALUE IS       0.39207 AT (  413468.80,  3762244.65,   125.49,   125.49,    0.00)  DC
          9TH HIGHEST VALUE IS       0.38952 AT (  413448.80,  3762274.65,   125.55,   125.55,    0.00)  DC
         10TH HIGHEST VALUE IS       0.38339 AT (  413458.80,  3762254.65,   125.50,   125.50,    0.00)  DC


 *** AERMOD - VERSION  18081 ***   *** Wedgeworth Elementary School                                  ***        11/05/18
 *** AERMET - VERSION  16216 ***   *** HRA, Hacienda Heights                                         ***        12:43:38
                                                                                                              PAGE 247
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                  *** THE SUMMARY OF MAXIMUM PERIOD ( 43848 HRS) RESULTS ***


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

                                                                                                    NETWORK
GROUP ID                       AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

TRUCKS    1ST HIGHEST VALUE IS       1.92609 AT (  413438.80,  3762304.65,   125.42,   125.42,    0.00)  DC
          2ND HIGHEST VALUE IS       1.81339 AT (  413428.80,  3762304.65,   125.45,   125.45,    0.00)  DC
          3RD HIGHEST VALUE IS       1.73879 AT (  413448.80,  3762294.65,   125.47,   125.47,    0.00)  DC
          4TH HIGHEST VALUE IS       1.70775 AT (  413418.80,  3762304.65,   125.53,   125.53,    0.00)  DC
          5TH HIGHEST VALUE IS       1.64402 AT (  413438.80,  3762294.65,   125.48,   125.48,    0.00)  DC
          6TH HIGHEST VALUE IS       1.61128 AT (  413408.80,  3762304.65,   125.61,   125.61,    0.00)  DC
          7TH HIGHEST VALUE IS       1.57886 AT (  413458.80,  3762284.65,   125.47,   125.47,    0.00)  DC
          8TH HIGHEST VALUE IS       1.55498 AT (  413428.80,  3762294.65,   125.53,   125.53,    0.00)  DC
          9TH HIGHEST VALUE IS       1.52431 AT (  413398.80,  3762304.65,   125.66,   125.66,    0.00)  DC
         10TH HIGHEST VALUE IS       1.49621 AT (  413448.80,  3762284.65,   125.51,   125.51,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

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

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
CARS HIGH 1ST HIGH VALUE IS	62.12472	ON 14120116:	AT (413438.80, 3762304.65, 125.42, 125.42, 0.00)	DC	
2_refuel HIGH 1ST HIGH VALUE IS	120.27519	ON 12021515:	AT (413458.80, 3762284.65, 125.47, 125.47, 0.00)	DC	
3a_fuell HIGH 1ST HIGH VALUE IS	30.28350	ON 13121912:	AT (413468.80, 3762244.65, 125.49, 125.49, 0.00)	DC	
3b HIGH 1ST HIGH VALUE IS	10.93024	ON 13121916:	AT (413308.80, 3762314.65, 125.63, 125.63, 0.00)	DC	
2_spill HIGH 1ST HIGH VALUE IS	135.48539	ON 12021515:	AT (413468.80, 3762244.65, 125.49, 125.49, 0.00)	DC	
3a_spill HIGH 1ST HIGH VALUE IS	36.56940	ON 13121912:	AT (413468.80, 3762244.65, 125.49, 125.49, 0.00)	DC	
2_vent HIGH 1ST HIGH VALUE IS	100.84144	ON 12021515:	AT (413458.80, 3762284.65, 125.47, 125.47, 0.00)	DC	
3a_vent HIGH 1ST HIGH VALUE IS	47.32601	ON 14121212:	AT (413448.80, 3762294.65, 125.47, 125.47, 0.00)	DC	
TRUCKS HIGH 1ST HIGH VALUE IS	58.96822	ON 12021515:	AT (413438.80, 3762304.65, 125.42, 125.42, 0.00)	DC	

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

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

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

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
CARS HIGH 1ST HIGH VALUE IS	24.49755	ON 13121916:	AT (413438.80, 3762304.65, 125.42, 125.42, 0.00)	DC	
2_refuel HIGH 1ST HIGH VALUE IS	23.69335	ON 12021516:	AT (413458.80, 3762284.65, 125.47, 125.47, 0.00)	DC	
3a_fuell HIGH 1ST HIGH VALUE IS	10.95619	ON 13121916:	AT (413468.80, 3762234.65, 125.50, 125.50, 0.00)	DC	
3b HIGH 1ST HIGH VALUE IS	1.58483	ON 13121916:	AT (413318.80, 3762314.65, 125.67, 125.67, 0.00)	DC	
2_spill HIGH 1ST HIGH VALUE IS	25.30044	ON 12021516:	AT (413458.80, 3762284.65, 125.47, 125.47, 0.00)	DC	
3a_spill HIGH 1ST HIGH VALUE IS	11.56834	ON 13121916:	AT (413468.80, 3762234.65, 125.50, 125.50, 0.00)	DC	
2_vent HIGH 1ST HIGH VALUE IS	20.58342	ON 12021516:	AT (413458.80, 3762284.65, 125.47, 125.47, 0.00)	DC	
3a_vent HIGH 1ST HIGH VALUE IS	14.63350	ON 12020616:	AT (413438.80, 3762304.65, 125.42, 125.42, 0.00)	DC	
TRUCKS HIGH 1ST HIGH VALUE IS	24.71227	ON 13121916:	AT (413438.80, 3762304.65, 125.42, 125.42, 0.00)	DC	

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

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

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

A Total of   0 Fatal Error Message(s)
A Total of   3 Warning Message(s)
A Total of   1684 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   75 Calm Hours Identified

A Total of   1609 Missing Hours Identified (3.67 Percent)

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

   ********   WARNING MESSAGES   ********
SO W320   158   PPARM: Input Parameter May Be Out-of-Range for Parameter   VS
ME W186   842   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used   0.50
ME W187   842   MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

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

Appendix E. Risk Calculations

Appendix

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Table E1a
MER Concentration Worksheet
Toxic Air Contaminants - Mobile Sources

Source No. (a)	Source (b)	Contaminant (c)	Weight Fraction (d)	Emission Rates[1] **Annual Avg** (g/s) (e)	AERMOD Output[2] **Annual Avg** ($\mu g/m^3$) (f)	Annual Average MER Concentration ($\mu g/m^3$) (g)	Emission Rates[1] **1-Hour** (g/s) (h)	AERMOD Output[2] **1-Hour** ($\mu g/m^3$) (i)	Acute (1-Hour) MER Concentration ($\mu g/m^3$) (j)
Staff Scenario									
1	SR-60 Trucks (DPM)	Diesel Particulate	1.00E+00	1.20E-02	1.926	0.02308	n/a		
	SR-60 Cars (TOG)	Acetaldehyde	2.80E-03	6.63E-02	1.995	0.00037	5.99E-02	62.12	0.0104
		Acrolein	1.30E-03			0.00017			0.0048
		Benzene	2.83E-02			0.00374			0.1053
		1,3-Butadiene	5.50E-03			0.00073			0.0205
		Ethyl benzene	1.17E-02			0.00155			0.0435
		Formaldehyde	1.58E-02			0.00209			0.0588
		Hexane	3.14E-02			0.00415			0.1168
		Methanol	1.20E-03			0.00016			0.0045
		Methyl Ethyl Ketone	2.00E-04			0.000026			0.0007
		Naphthalene	5.00E-04			0.00007			0.0019
		Propylene	3.06E-02			0.00405			0.1138
		Styrene	1.20E-03			0.00016			0.0045
		Toluene	7.46E-02			0.00987			0.2775
		Xylenes	5.38E-02			0.00712			0.2001
Student Scenario									
1	SR-60 Trucks (DPM)	Diesel Particulate	1.00E+00	1.11E-02	1.926	0.02132	n/a		
	SR-60Cars (TOG)	Acetaldehyde	2.80E-03	6.12E-02	1.995	0.00034	5.99E-02	62.12	0.0104
		Acrolein	1.30E-03			0.00016			0.0048
		Benzene	2.83E-02			0.00346			0.1053
		1,3-Butadiene	5.50E-03			0.00067			0.0205
		Ethylbenzene	1.17E-02			0.00143			0.0435
		Formaldehyde	1.58E-02			0.00193			0.0588
		Hexane	3.14E-02			0.00384			0.1168
		Methanol	1.20E-03			0.00015			0.0045
		Methyl Ethyl Ketone	2.00E-04			0.000024			0.0007
		Naphthalene	5.00E-04			0.00006			0.0019
		Propylene	3.06E-02			0.00374			0.1138
		Styrene	1.20E-03			0.00015			0.0045
		Toluene	7.46E-02			0.00911			0.2775
		Xylenes	5.38E-02			0.00657			0.2001
Note: Maximum Exposed Receptor (MER)						For Cancer/Chronic Calculation			For Acute Calculation

[1] Emission Rates, per source, from Source Emissions Inventories (Appendix C).

[2] AERMOD Output (Appendix D) at the maximum exposed receptor (MER) are based on unit emission rates for emission sources (1 g/s per source).

Table E1b
MER Concentration Worksheet
Toxic Air Contaminants - Stationary Sources

Source No.	Source	Contaminant	Weight Fraction	Emission Rates[1] **Annual Avg** (g/s)	AERMOD Output[2] **Annual Avg** ($\mu g/m^3$)	Annual Average MER Concentration ($\mu g/m^3$)	AERMOD Output[2] **1-Hour** ($\mu g/m^3$)	Acute (1-Hour) MER Concentration ($\mu g/m^3$)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Staff and Student Scenarios								
2	Fire Station 118 (gas refueling)	Benzene	3.00E-03	1.16E-04	0.65	2.26E-07	120.3	4.18E-05
	(spillage)	Benzene	1.00E-02	2.08E-04	0.65	1.36E-06	135.5	2.81E-04
	(venting)	Benzene	3.00E-03	1.51E-04	0.59	2.67E-07	100.8	4.56E-05
3	Toyota (gas refueling)	Benzene	3.00E-03	2.92E-04	0.42	3.66E-07	30.3	2.65E-05
	(spillage)	Benzene	1.00E-02	5.23E-04	0.42	2.18E-06	36.6	1.91E-04
	(venting)	Benzene	3.00E-03	4.22E-04	0.44	5.52E-07	47.3	5.99E-05
	(spraybooth)	Benzene	1.00E+00	1.73E-07	0.02	4.13E-09	10.9	1.89E-06
Note: Maximum Exposed Receptor (MER)						For Cancer/Chronic Calculation		For Acute Calculation

[1] Emission Rates, per source, from Source Emissions Inventories (Appendix C).

[2] AERMOD Output (Appendix D) at the maximum exposed receptor (MER) are based on unit emission rates for emission sources (1 g/s per source).

Table E2
HARP2 Results for Cancer Risk and Chronic Hazards
School Scenario

No.	Source	Contaminant	**Carcinogenic Risks**		Chronic Non-Cancer Risks [2] - Toxicological Endpoints*											
			Staff	**Students**	CV	CNS	IMMUN	KIDNEY	GILV	REPRO	**RESP**	SKIN	EYE	BONE	ENDO	BLOOD
			per million	per million												
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
1	SR-60 Trucks (DPM)	Diesel Particulate	1.4E+00	2.3E+00							4.62E-03					
	SR-60 Cars (TOG)	Acetaldehyde	2.1E-04	3.4E-04							2.64E-06					
		Acrolein									4.86E-04					
		Benzene	2.1E-02	3.4E-02												1.25E-03
		1,3-Butadiene	2.5E-02	4.0E-02						3.65E-04						
		Ethylbenzene	7.6E-04	1.2E-03				7.75E-07	7.75E-07	7.75E-07					7.75E-07	
		Formaldehyde	2.5E-03	4.0E-03							2.32E-04					
		Hexane				5.93E-07										
		Methanol								4.00E-08						
		Methyl Ethyl Ketone														
		Naphthalene	4.7E-04	7.1E-04							7.78E-06					
		Propylene									1.35E-06					
		Styrene				1.78E-07										
		Toluene				3.29E-05				3.29E-05	3.29E-05					
		Xylenes				1.02E-05					1.02E-05		1.02E-05			
2	Fire Station 118 (gas	Benzene	1.3E-06	2.2E-06												7.53E-08
	(spillage)	Benzene	7.7E-06	1.3E-05												4.53E-07
	(venting)	Benzene	1.5E-06	2.6E-06												8.90E-08
3	Toyota (gas refueling)	Benzene	2.1E-06	3.6E-06												1.22E-07
	(spillage)	Benzene	1.2E-05	2.2E-05												7.27E-07
	(venting)	Benzene	3.1E-06	5.5E-06												1.84E-07
	(spraybooth)	Benzene	2.3E-08	4.1E-08												1.38E-09
		Total - All Sources	**1.48**	**2.40**	0.00E+00	4.38E-05	0.00E+00	7.75E-07	7.75E-07	3.99E-04	**5.39E-03**	0.00E+00	1.02E-05	0.00E+00	7.75E-07	1.25E-03

Note: Health risks calculated using HARP2, Risk Assessment Standalone Tool, version 18159 (CARB, 2018).

Total Cancer Risk	**Staff**	**1.48**	per million
Total Cancer Risk	**Students**	**2.40**	per million
Maximum Chronic Hazard Index		**5.39E-03**	**RESP**

	Staff	Students	
	16 < 70 years	2 < 16 years	age bin
Dose Exposure Factors:	250	180	exposure frequency (days/year)
	230	520	8-hour inhalation rate (L/kg-8 hours) [1]
	1	1	inhalation absorption factor
Risk Calculation Factors:	1	3	age sensitivity factor
	25	9	exposure duration (years)
	70	70	averaging time (years)

* Key to Toxicological Endpoints

CV	Cardiovascular System
CNS	Central Nervous System
IMMUN	Immune System
KIDN	Kidneys
GILV	Gastrointestinal Tract and Liver/Alimentary Tract
RESP	Respiratory System
REPRO	Reproductive System
SKIN	Skin irritation and/or other effects
EYE	Eye irritation and/or other effects
BONE	Bones and Teeth
ENDO	Endocrine System
BLOOD	Hematological System

[1] 8-hour inhalation rate taken as the 95th percentile breathing rates for Moderate Intensity Activities (OEHHA, 2015).

[2] Staff Scenario emission rates produced higher chronic hazard indices, compared to Student Scenario emission rates.

Table E3
HARP2 Results for Acute Hazards

Source No. (a)	Source (b)	Contaminant (c)	Acute Non-Cancer Risks - Toxicological Endpoints*										
			CV (d)	CNS (e)	IMMUN (f)	KIDNEY (g)	GILV (h)	**REPRO** (i)	RESP (j)	SKIN (k)	EYE (l)	BONE (m)	ENDO (n)	BLOOD (o)
1	SR-60 Trucks (DPM) SR-60 Cars (TOG)	Diesel Particulate												
		Acetaldehyde							2.21E-05		2.21E-05			
		Acrolein							1.92E-03		1.92E-03			
		Benzene			3.90E-03			3.90E-03						3.90E-03
		1,3-Butadiene						3.11E-05						
		Ethylbenzene												
		Formaldehyde									1.07E-03			
		Hexane												
		Methanol		1.61E-07										
		Methyl Ethyl Ketone							5.38E-08		5.38E-08			
		Naphthalene												
		Propylene												
		Styrene						2.14E-07	2.14E-07		2.14E-07			
		Toluene		7.50E-06				7.50E-06	7.50E-06		7.50E-06			
		Xylenes		9.10E-06					9.10E-06		9.10E-06			
2	Fire Station 118 (gas	Benzene			1.55E-06			1.55E-06						1.55E-06
	(spillage)	Benzene			1.04E-05			1.04E-05						1.04E-05
	(venting)	Benzene			1.69E-06			1.69E-06						1.69E-06
3	Toyota (gas refueling)	Benzene			9.81E-07			9.81E-07						9.81E-07
	(spillage)	Benzene			7.07E-06			7.07E-06						7.07E-06
	(venting)	Benzene			2.22E-06			2.22E-06						2.22E-06
	(spraybooth)	Benzene			7.00E-08			7.00E-08						7.00E-08
	Total - All Sources		0.00E+00	1.68E-05	3.92E-03	0.00E+00	0.00E+00	**3.96E-03**	1.96E-03	0.00E+00	3.03E-03	0.00E+00	0.00E+00	3.92E-03

Note: Staff and Student scenarios produce the same acute (1-hour) hazard indices.

Note: Health risks calculated using HARP2, Risk Assessment Standalone Tool, version 18159 (CARB, 2018).

Maximum Acute Hazard Index 3.96E-03 Repro

* Key to Toxicological Endpoints

CV	Cardiovascular System	RESP	Respiratory System
CNS	Central Nervous System	SKIN	Skin irritation and/or other effects
IMMUN	Immune System	EYE	Eye irritation and/or other effects
KIDN	Kidneys	BONE	Bones and Teeth
GILV	Gastrointestinal Tract and Liver/Alimentary Tract	ENDO	Endocrine System
REPRO	Reproductive System	BLOOD	Hematological System

Table E4
HARP2 Results for 8-Hour Hazards

Source No. (a)	Source (b)	Contaminant (c)	8-Hour Non-Cancer Risks - Toxicological Endpoints*										
			CV (d)	CNS (e)	IMMUN (f)	KIDNEY (g)	GILV (h)	REPRO (i)	RESP (j)	SKIN (k)	EYE (l)	BONE (m)	ENDO (n)	**BLOOD (o)**
1	SR-60 Trucks (DPM)	Diesel Particulate												
	SR-60 Cars (TOG)	Acetaldehyde							1.23E-06					
		Acrolein							2.43E-04					
		Benzene												1.25E-03
		1,3-Butadiene						8.11E-05						
		Ethylbenzene												
		Formaldehyde							2.32E-04					
		Hexane												
		Methanol												
		Methyl Ethyl Ketone												
		Naphthalene												
		Propylene												
		Styrene												
		Toluene												
		Xylenes												
2	Fire Station 118 (gas	Benzene												7.53E-08
	(spillage)	Benzene												4.53E-07
	(venting)	Benzene												8.90E-08
3	Toyota (gas refueling)	Benzene												1.22E-07
	(spillage)	Benzene												7.27E-07
	(venting)	Benzene												1.84E-07
	(spraybooth)	Benzene												1.38E-09
	Total - All Sources		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-05	4.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.25E-03**

Note: Staff Scenario emission rates produced higher 8-hour chronic hazard indices, compared to Student Scenario emission rates.

Note: Health risks calculated using HARP2, Risk Assessment Standalone Tool, version 18159 (CARB, 2018).

Maximum 8-Hour Hazard Index 1.25E-03 Blood

* Key to Toxicological Endpoints

CV	Cardiovascular System	RESP	Respiratory System
CNS	Central Nervous System	SKIN	Skin irritation and/or other effects
IMMUN	Immune System	EYE	Eye irritation and/or other effects
KIDN	Kidneys	BONE	Bones and Teeth
GILV	Gastrointestinal Tract and Liver/Alimentary Tract	ENDO	Endocrine System
REPRO	Reproductive System	BLOOD	Hematological System

Table E5
Mobile Source Pollutant Concentration Worksheet
Criteria Air Pollutants

Criteria Air Pollutants						
Pollutant (a)	Source (b)	Emission Rates [1] (g/s) (c)	AERMOD Output [2] ($\mu g/m^3$) (d)	Mass GLC ($\mu g/m^3$) (e)	AERMOD Output [2] ($\mu g/m^3$) (f)	Mass GLC ($\mu g/m^3$) (g)
PM_{10}			Annual Average			
	SR-60	2.52E-01	1.99	**0.50**		
	LST Threshold ($\mu g/m^3$)			1.0		
	Exceeds Threshold?			**No**		
CO			Max 1-hour		Max 8-hour	
	SR-60	1.76E+00	62.1	1.10E+02	24.5	4.32E+01
	SR-60 (ppm) [3]			**0.10**		**0.04**
	Background Level (ppm)			4.0		2.5
	Total (ppm)			**4.1**		**2.5**
	CAAQS Threshold (ppm)			20.0		9.0
	Exceeds Threshold?			**No**		**No**
NOx			Max 1-hour		Annual Average	
	SR-60	6.91E-01	62.1	4.29E+01	1.99	1.38E+00
	SR-60 (ppm) [4]			2.28E-02		7.33E-04
NO_2	SR-60 (ppm) [5]			1.82E-03		5.83E-05
	Background Level (ppm)			0.087		0.021
	Total (ppm)			**0.089**		**0.021**
	CAAQS Threshold (ppm)			0.18		0.030
	Exceeds Threshold?			**No**		**No**

[1] Emission Rates from Source Emissions Inventory (Appendix A).

[2] AERMOD Output based on unit emission rates for roadway segments (1 g/s).

[3] CO conversion factor of 8.733E-04 ppm per $\mu g/m^3$ was used to convert concentrations.

[4] NOx conversion factor of 5.3157E-04 ppm per $\mu g/m^3$ was used to convert concentrations.

[5] NOx to NO_2 conversion rate was derived from a report entitled Final Localized Significance Threshold Methodology (SCAQMD, 2008)

Mobile Source	Distance from Roadway to Project Site (m)	NO_X to NO_2 Conversion Factor
SR-60	107	0.0796