

Appendix G

Health Risk Assessment

Sunset/Western Mixed-Use Project

HEALTH RISK ASSESSMENT

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May 2018

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1.0 INTRODUCTION

In 2005, the California Air Resources Board (ARB) promulgated an advisory recommendation to avoid siting sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day or rural roads with 50,000 vehicles per day. According to the ARB, the increased cancer risk is 300 to 1,700 per million within this domain. The strongest association of traffic related emissions with adverse health outcomes was seen within 300 feet of roadways with high truck densities. Notwithstanding, the ARB notes that a site specific analysis would be required to determine the actual risk near a particular land use and should consider factors such as prevailing wind direction and local topography.

The Los Angeles City Planning Commission (Commission) has also drafted an advisory notice (*Zoning Information No. 2427 - Freeway Adjacent Advisory Notice for Sensitive Land Uses*) regarding siting sensitive land uses near freeways. The Commission reports that freeways are a major source of air pollution and their impact on public health has been and continues to be subject to public health research. Further, the Commission notes that this research traditionally focused on impacts to communities within 500 feet of freeways; however, recent studies have established strong links to negative health outcomes affecting sensitive populations up to and beyond 1,000 feet. The Commission believes that 1,000 feet is a conservative distance to evaluate proposed projects that house populations considered to be more at-risk from the negative effects of air pollution. The Commission advises that applicants of projects requiring discretionary approval, located in proximity of a freeway, and contemplating residential units and other sensitive uses, perform a health risk assessment (HRA). It is believed that the HRA will serve to identify potential health risks and enable applicants to make informed decisions about site planning and project design.

The Los Angeles City Municipal Code was recently amended to require minimum efficiency reporting value (MERV) 13 filtration for projects located within 1,000 feet of a freeway. However, there is no technical basis for this directive. Depending on site conditions, lower or higher MERV filtration may be required based upon actual distance from the freeway, height of building structures and location of proposed mechanical ventilation equipment. In addition, common air filtration is limited in its effectiveness to remove gaseous emissions within building structures and has no effect on reducing outdoor pollutant concentrations while individuals frequent amenities such as courtyards and related common areas. An assessment of both acute and chronic exposures to toxic and criteria pollutants is required to address these concerns.

Based upon the considerations noted above, an HRA was prepared to assess the potential effects of pollutants on individuals who utilize/reside at the proposed project site. The analysis also serves to provide a nexus between identified impacts and the effectiveness of available mitigation measures.

The assessment and dispersion modeling methodologies used in the preparation of this report were composed of all relevant and appropriate procedures presented by the U.S. Environmental Protection Agency, California Environmental Protection Agency and

SCAQMD. The methodologies and assumptions offered under this regulatory guidance were used to ensure that the assessment effectively quantified pollutant exposures associated with the generation of contaminant emissions from adjacent mobile source activity. This report summarizes the protocol used to evaluate contaminant exposures and presents the results of the health risk assessment.

2.0 SITE DESCRIPTION

The project proposes the construction of a new mixed-use building consisting of 735 multi-family residential units and approximately 95,820 square feet of neighborhood serving commercial uses, including market/retail uses. The proposed uses would be provided within four buildings that would be up to six stories with a maximum height of 75 feet. Each building at the podium level is oriented around an open space courtyard with shared amenities for residents that would include multiple terraces with swimming pools, spas, cabanas, multiple lounge and seating areas, paseos with water and landscape elements, a fitness courtyard, outdoor fireplaces, outdoor kitchens, dog park, community garden space and private patios.

The site is located within the Hollywood Community Plan Area, the Hollywood Redevelopment Project Area and is zoned for commercial (C-2) uses. The project is bounded by Sunset Boulevard to the north, a proposed mixed-use development to the south, Western Avenue to the west and Serrano Avenue to the east. The southwesterly edge of the site lies approximately 800 feet from the U.S. Route 101 (Hollywood) freeway. Figure 1 presents an aerial photograph of the project location and adjoining community.

Figure 1
Site Location /Vicinity Aerial Photograph



3.0 SOURCE IDENTIFICATION

The California Department of Transportation (Caltrans) Performance Measurement System (PeMS) collects and maintains traffic information for roadways traversing the California state highway system. PeMS is a data management system that stores and processes raw data in real time. PeMS can be accessed via an internet browser and contains a series of built-in analytical capabilities to support the elucidation of a variety of analytical scenarios allowing users to query both current and archived freeway performance data. For this analysis, aggregate time series data for the 2017 calendar year was accessed to identify traffic volume (flow) and vehicle speeds to accommodate an assessment of chronic (long term), annual, 24-hour, 8-hour and acute (1-hour) exposures.

Caltrans also collects and maintains traffic volume counts for freeway on/off ramps and adjoining segments. Due to the paucity of this information in the PeMS database, the Traffic and Vehicle Data Systems Unit database was reviewed to obtain representative traffic volumes for these discrete roadway segments.

Based upon the arithmetic average of traffic flow identified in the PeMS database and population profiles noted above, hourly traffic volumes for the north and southbound freeway segments were identified. For acute exposures, the MROUND function in Excel was utilized to identify congested roadway conditions representing minimum route speeds rounded to the nearest 5 mile per hour increment. Reported ramp volumes were assumed to have a uniform distribution and were averaged to produce an hourly traffic profile. Table 1 presents the hourly traffic volumes considered in the assessment.

Table 1
Hourly Freeway Traffic Volumes

Roadway Segment	Speed Scenario	Traffic Volumes		
		All	Gas	Diesel
U.S. Route 101 Northbound	Average	4904	4699	205
U.S. Route 101 Southbound	Average	3670	3517	153
U.S. Route 101 Northbound	Minimum	1416	1357	59
U.S. Route 101 Southbound	Minimum	2928	2806	122
Southbound Off/Western Avenue	Average Minimum	408	391	17
Northbound On/Western Avenue	Average Minimum	518	496	22

4.0 SOURCE CHARACTERIZATION

In urban communities, vehicle emissions contribute significantly to localized concentrations of air contaminants. Typically, emissions generated from these sources are characterized by

vehicle mix, the rate pollutants are generated during the course of travel and the number of vehicles traversing the roadway network.

Currently, emission factors are generated from a series of computer based programs to produce a composite emission rate for vehicles traveling at various speeds within a defined geographical area or along a discrete roadway segment. To account for the emission standards imposed on the California fleet, the ARB has developed the EMFAC2017 emission factor model. EMFAC2017 was utilized to identify pollutant emission rates for total organic gases (TOG), diesel particulates, particulates (PM₁₀ and PM_{2.5}), carbon monoxide (CO) and nitrogen oxide (NO_x) compounds. To produce a representative vehicle fleet distribution, the assessment utilized ARB's Los Angeles County (South Coast) population estimates for the proposed project buildout year of 2024. Table 2 lists the identified fleet mix considered in the assessment.

Table 2
Vehicle Fleet Mix Profile

Vehicle Class	Los Angeles County (SC)		
	Fuel	Population	Percent
LDA	Diesel	38501	0.51
LDA	Gas	4021900	53.33
LDT1	Diesel	235	0.00
LDT1	Gas	486401	6.45
LDT2	Diesel	10555	0.14
LDT2	Gas	1423191	18.87
LHDT1	Diesel	73357	0.97
LHDT1	Gas	105027	1.39
LHDT2	Diesel	29768	0.39
LHDT2	Gas	18080	0.24
MCY	Gas	190348	2.52
MDV	Diesel	23002	0.31
MDV	Gas	941490	12.48
MH	Diesel	6460	0.09
MH	Gas	18822	0.25
MHDT	Diesel	67593	0.90
MHDT	Gas	14760	0.20
HHDT	Diesel	58993	0.78
HHDT	Gas	52	0.00
OBUS	Diesel	3186	0.04
OBUS	Gas	3959	0.05
SBUS	Diesel	3528	0.05
SBUS	Gas	1585	0.02
UBUS	Diesel	10	0.00
UBUS	Gas	466	0.01

Note: Vehicle category descriptions can be found on the California Air Resources Board website at <http://www.arb.ca.gov/msei/modeling.htm>.

Route speeds of 60 miles per hour for the northbound and 55 miles per hour for the southbound freeway segments were based upon the arithmetic average of hourly speeds reported in the PeMS database. A route speed of 5 miles per hour for the northbound and southbound segments was utilized to characterize congested or minimum speed conditions.

For particulates (PM₁₀ and PM_{2.5}), emissions were quantified through the reentrainment of paved roadway dust. The predictive emission equation developed by the U.S. Environmental Protection Agency (AP-42, Section 13.2.1) was utilized to generate particulate source strength. To account for the mass rate of emissions entrained from the roadway surface, the contribution from exhaust, brake and tire wear were added to the AP-42 emission factor equation. Compounds associated with on-road mobile source emissions are presented in Table 3.

Table 3
Compounds Emitted From On-Road Mobile Source Activity

Pollutant
Benzene
Formaldehyde
1,3-Butadiene
Acetaldehyde
Acrolein
Diesel Particulates
Reentrained Particulates (PM ₁₀ , PM _{2.5})
Carbon Monoxide (CO)
Nitrogen Dioxide (NO ₂)

Appendix B presents the emission rate calculation worksheets for the freeway segments considered in the assessment.

5.0 EXPOSURE QUANTIFICATION

In order to assess the impact of emitted compounds on individuals who reside within and/or access common areas throughout the project area, air quality modeling utilizing the AMS/EPA Regulatory Model AERMOD was performed to assess the downwind extent of mobile source emissions located within a 1,000 feet of the project site. AERMOD is a steady-state Gaussian plume model applicable to directly emitted air pollutants that employs best state-of-practice parameterizations for characterizing meteorological influences and atmospheric dispersion. AERMOD is the U.S. Environmental Protection Agency's guideline model for the assessment of near-field pollutant dispersion.

The model offers additional flexibility by allowing the user to assign initial vertical and lateral dispersion parameters for sources representative of a localized mobile fleet. For this assessment, the volume source algorithm was utilized to model the emissions generated from mobile source activity. Vertical (sigma z) dispersion parameters were developed for each source location by approximating mixing zone residence time and quantifying the initial

vertical term as performed in the California Line Source Dispersion Model Caline3. The horizontal (σ_y) parameters were generated by dividing the source separation distance by a standard deviation of 2.15.

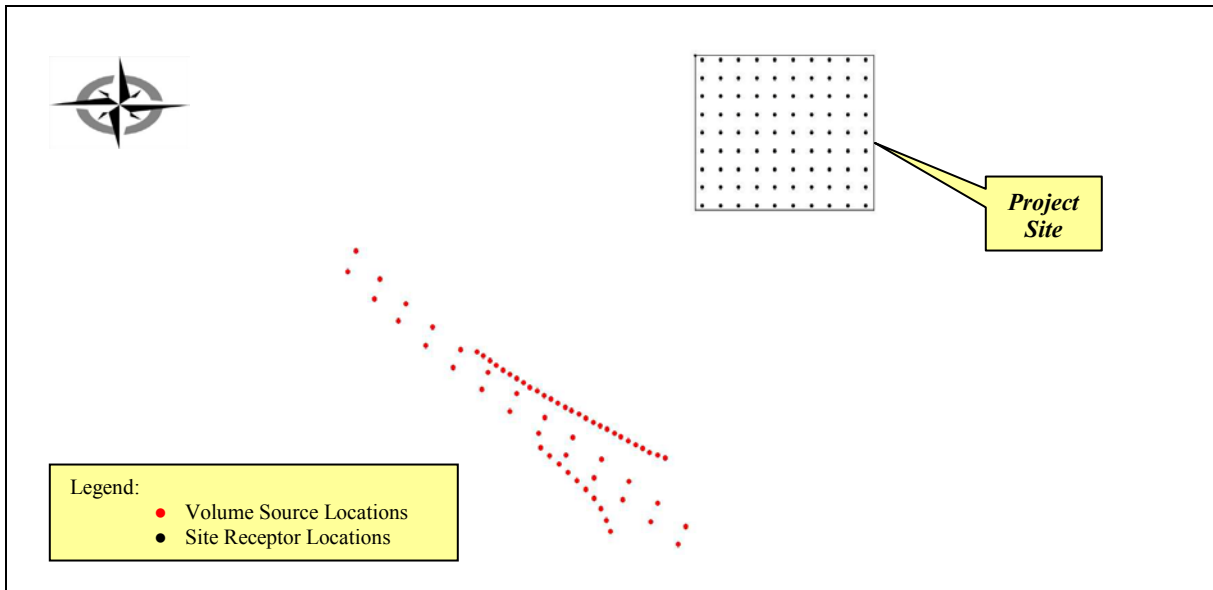
The Ambient Ratio Method 2 (ARM2), which is based on an evaluation of NO_2/NO_x ratios from the U.S. Environmental Protection Agency's Air Quality System (AQS) record of ambient air quality data, was used to assess the impacts of NO_2 . The U.S. Environmental Protection Agency reports that results from ARM2 simulations are more conservative relative to the Tier 3 methods associated with the ozone limiting (OLM) and plume volume molar ratio (PVMRM) methods currently recommended in the Guideline on Air Quality Models, Appendix W. For this analysis, the ARM2 default minimum and maximum NO_2/NO_x ratios of 0.5 and 0.9 were incorporated into the model simulation.

Air dispersion models require additional input parameters including pollutant emission data and local meteorology. Due to their sensitivity to individual meteorological parameters such as wind speed and direction, the U.S. Environmental Protection Agency recommends that meteorological data used as input into dispersion models be selected on the basis of relative spatial and temporal conditions that exist in the area of concern. In response to this recommendation, meteorological data from the SCAQMD Central Los Angeles monitoring station (Source Receptor Area 1) was used to represent local weather conditions and prevailing winds. For short duration exposures, five years of available AERMOD meteorological data were reviewed to identify the calendar years which produced the highest pollutant concentrations. For chronic exposures, maximum concentrations were produced by incorporating all five years of available data.

The modeling analysis also considered the spatial distribution of mobile source activity in relation to the proposed site. To accommodate a Cartesian grid format, direction dependent calculations were obtained by identifying the universal transverse mercator (UTM) coordinates for each volume source location. On-site receptors were uniformly placed to provide coverage across the identified project boundary commensurate with residential uses and areas of common access. Terrain height adjustments were incorporated into the modeling exercise to account for the discrepancy in source elevations and the average grade plane of the proposed project.

For 1-hour and 8-hour exposures, receptor locations were set at flagpole heights commensurate with transient and areas of common access. For chronic, annual and 24-hour exposures, receptor locations were set at flagpole heights representing residential floor levels and the presumed height above local terrain for proposed heating, ventilation and air conditioning (HVAC) equipment. A graphical representation of the source-receptor grid network is presented in Figure 2.

Figure 2
Source-Receptor Grid Network



A dispersion model input table is provided in Appendix C. A listing of model output summary files are provided in Appendix E.

6.0 RISK CHARACTERIZATION

For chronic, annual and 24-hour exposures, concentration estimates for residential receptors are considered static whereby exposures are assumed to be continuous based upon the averaging time under consideration. Short duration exposures (i.e., 1 and 8-hour) apply to all common areas such as a pool and related residential/guest amenities since it is reasonable to assume that an individual could be present for periods of one to eight hours.

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. As a result, the State of California has established a threshold of one in one hundred thousand (1.0E-05) as a level posing no significant risk for exposures to carcinogens regulated under the Safe Drinking Water and Toxic Enforcement Act (Proposition 65). This threshold is also consistent with the maximum incremental cancer risk established by the SCAQMD for projects prepared under the auspices of the California Environmental Quality Act (CEQA).

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. Under a deterministic approach (i.e., point estimate methodology), the cancer risk probability is determined by multiplying the chemical's annual concentration by its unit risk factor (URF). None of the compounds considered in the assessment have oral slope factors and, as such, a multi-pathway analysis was not performed. The URF is a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation

pathway. It represents an upper bound estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter ($\mu\text{g}/\text{m}^3$) over a 70 year lifetime. The URFs utilized in the assessment and corresponding cancer potency factors were obtained from the *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values*.

Notwithstanding, it is the intent of the HRA to provide cumulative risk estimates from near-field on-road sources that are reflective of anticipated exposures experienced at a given residential occupancy. As such, a review of relevant guidance was conducted to determine applicability of the use of early life exposure adjustments to identified carcinogens. For risk assessments conducted under the auspices of The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly, Statutes of 1987; Health and Safety Code Section 44300 et seq.) a weighting factor is applied to all carcinogens regardless of purported mechanism of action. However, for this assessment, the HRA relied upon U.S. Environmental Protection Agency guidance relating to the use of early life exposure adjustment factors (*Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens*, EPA/630/R-003F) whereby adjustment factors are only considered when carcinogens act "through the mutagenic mode of action." In 2006, the U.S. Environmental Protection Agency published a memorandum which provided guidance regarding the preparation of health risk assessments should carcinogenic compounds elicit a mutagenic mode of action (USEPA, 2006). As presented in the technical memorandum, numerous compounds were identified as having a mutagenic mode of action. Based upon this review, none of the gaseous compounds considered in the HRA were identified and, therefore, early life exposure adjustments were not considered. For diesel particulates, polycyclic aromatic hydrocarbons (PAHs) and their derivatives, which are known to exhibit a mutagenic mode of action, comprise < 1% of the exhaust particulate mass. To date, the U.S. Environmental Agency reports that whole diesel engine exhaust has not been shown to elicit a mutagenic mode of action (USEPA, 2018).

To effectively quantify dose, the procedure requires the incorporation of several discrete exposure variates. Once determined, contaminant dose is multiplied by the cancer potency factor (CPF) in units of inverse dose expressed in milligrams per kilogram per day ($\text{mg}/\text{kg}/\text{day}$)⁻¹ to derive the cancer risk estimate. Therefore, to assess exposures associated with the proposed residential population, the following dose algorithm was utilized.

$$CDI = (C_{air} \times EF \times ED \times IR) / (BW \times AT)$$

Where:

CDI = chronic daily intake ($\text{mg}/\text{kg}/\text{day}$)
 C_{air} = concentration of contaminant in air (mg/m^3)
 EF = exposure frequency (days/year)
 ED = exposure duration (years)
 IR = inhalation rate (m^3/day)
 BW = body weight (kg)
 AT = averaging time (days)

To represent residential exposures, the assessment employed the U.S. Environmental Protection Agency's guidance to develop viable dose estimates based on reasonable

maximum exposures (RME). Specifically, activity patterns for population mobility recommended by the U.S. Environmental Protection Agency and presented in the *Exposure Factors Handbook* were utilized. As a result, lifetime risk values for residents were adjusted to account for an exposure duration of 350 days per year for 30 years (i.e., 95th percentile). Additional discussion regarding the use of the 30-year exposure duration is presented in Appendix D. A 9-year exposure duration was additionally assessed to identify risk estimates associated with the average time individuals are reported to reside at a given residence. These values are consistent with the California Environmental Quality Act which considers the evaluation of environmental effects of proposed projects in a manner that reflects both reasonable and feasible assumptions (*Laurel Heights Improvement Association of San Francisco, Inc. v. Regents of the University of California*). For body weight and inhalation, the assessment employed average adult values of 70 kilograms and 20 cubic meters per day, respectively.

Table 4 presents the maximum predicted residential receptor risk estimates. As noted, carcinogenic risks did not exceed the significance threshold of one in one hundred thousand (1.0E-05) for both the 30-year and 9-year exposure scenarios. Appendix A, Tables A1 through A10, columns f-g, present the URFs and corresponding cancer potency factors for carcinogens considered in the assessment. The cancer risk attributed to each compound and summation of those risks are presented in column h.

Table 4
Maximum Residential Receptor / Carcinogenic Risk

Floor Level	Exposure Scenario	
	30-Year	9-Year
2	9.1E-07	2.7E-07
3	8.6E-07	2.6E-07
4	7.7E-07	2.3E-07
5	6.8E-07	2.0E-07
6	5.8E-07	1.7E-07

6.2 Noncarcinogenic Hazards

An evaluation of the potential noncancer effects of contaminant exposures was also conducted. Under the point estimate approach, adverse health effects are evaluated by comparing the concentration of each compound with the appropriate Reference Exposure Level (REL). Available RELs presented in the *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values* were considered in the assessment.

To quantify noncarcinogenic impacts, the hazard index approach was used. The hazard index assumes that subthreshold exposures adversely affect a specific organ or organ system (i.e., toxicological endpoint). For each discrete pollutant exposure, target organs presented in regulatory guidance were utilized.

To calculate the hazard index, the pollutant concentration or dose is divided by the appropriate toxicity value. For compounds affecting the same toxicological endpoint, this ratio is summed. Where the total equals or exceeds one (i.e., unity), a health hazard is presumed to exist. For chronic exposures, RELs were converted to units expressed in mg/kg/day to accommodate the above referenced intake algorithm. To assess acute noncancer impacts, the maximum pollutant concentration is divided by the REL for the corresponding averaging time (e.g., 1-hour). No exposure frequency or duration adjustments are considered for short duration exposures.

For chronic noncarcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for the 30 and 9-year exposure scenarios. For acute exposures, the hazard indices for each respective averaging time did not exceed unity.

Appendix A, Tables A1 through A10, columns i-j, present the RELs and corresponding reference dose values used in the evaluation of chronic noncarcinogenic exposures. For the maximum exposed residential receptor, the noncancer hazard quotient for identified compounds generated from each source and a summation for each toxicological endpoint are presented in columns k-r. Tables A11 through A12, column e present the RELs for the assessment of acute exposures. Columns f-m identify each compound's hazard quotient and corresponding index for each endpoint for the maximum exposed receptor location.

6.3 Criteria Pollutant Exposures

The State of California has promulgated strict 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 which may be affected by increased pollutant concentrations. However, recent research has shown that unhealthy respiratory responses occur with exposures to pollutants at levels that only marginally exceed clean air standards. Table 5 presents the California Ambient Air Quality Standards (CAAQS) for the criteria pollutants considered in the assessment.

Table 5
California Ambient Air Quality Standards

Pollutant	Standard	Health Effects
Particulates (PM ₁₀)	>50 µg/m ³ (24-hr avg.) >20 µg/m ³ (Annual)	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.
Particulates (PM _{2.5})	>12 µg/m ³ (Annual)	1) Excess deaths and illness from long-term exposures and the exacerbation of symptoms in sensitive individuals with respiratory and cardio pulmonary disease.

Abbreviations: ppm: parts per million; µg/m³: micrograms per cubic meter.
Source: California Code of Regulations, Title 17, Section 70200.

Table 5 continued
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)	>0.18 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.

Abbreviations: ppm: parts per million; $\mu\text{g}/\text{m}^3$: 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 substantive pollutant concentrations. Should ambient air quality already exceed existing standards, the SCAQMD has established significance criteria for selected compounds to account for the continued degradation of local air quality. Background concentrations are based upon the highest observed value for the most recent three year period.

For PM₁₀ emissions, background concentrations representative of the project area exceed the CAAQS for the 24-hour and annual averaging times. As a result, a significant impact is achieved when pollutant concentrations produce a measurable change over existing background levels. For fine particulates, no measurable change criterion currently exists whereby the SCAQMD significance threshold of 2.5 $\mu\text{g}/\text{m}^3$ for the 24-hour averaging time is used to assess PM_{2.5} impacts.

For the CO 1 and 8-hour averaging times and the NO₂ 1-hour averaging time, background concentrations are below current air quality standards. As such, significance is achieved when pollutant concentrations add to existing levels and create an exceedance of the CAAQS.

Table 6 shows the pollutant concentrations collected at the Central Los Angeles monitoring station for the last three years of available data. Table 7 outlines the relevant significance thresholds considered to affect local air quality.

Table 6
Central Los Angeles Monitoring Summary

Pollutant/ Averaging Time	Year			
	2014	2015	2016	Maximum
Particulates (PM ₁₀) 24-Hour	87	88	67	88
Particulates (PM _{2.5}) 24-Hour	NA	NA	NA	NA
Particulates (PM ₁₀) Annual	35.4	33.0	32.4	35.4
Carbon Monoxide (CO) 1-Hour 8-Hour	3.0	3.2	1.9	3.2
	2.0	1.8	1.4	2.0
Nitrogen Dioxide (NO ₂) 1-Hour	0.0821	0.0791	0.0647	0.0821

Note:: PM₁₀ concentrations are expressed in micrograms per cubic meter (µg/m³). All others are expressed in parts per million (ppm).
Source: South Coast Air Quality Management District.

Table 7
SCAQMD Air Quality Significance Thresholds

Pollutant	Averaging Time	Pollutant Concentration
Particulates (PM ₁₀)	24-Hours	2.5 µg/m ³ (operation)
Particulates (PM _{2.5})	24-Hours	2.5 µg/m ³ (operation)
Particulates (PM ₁₀)	Annual	1.0 µg/m ³
Carbon Monoxide (CO)	1/8-Hours	SCAQMD is in attainment; impacts are significant if they cause or contribute to an exceedance of the following attainment standards 20 ppm (1-hour) and 9 ppm (8-hour).
Nitrogen Dioxide (NO ₂)	1-Hour	SCAQMD is in attainment; impacts are significant if they cause or contribute to an exceedance of the following attainment standard 0.18 ppm.

Abbreviations: ppm: parts per million; µg/m³: micrograms per cubic meter.
Source: South Coast Air Quality Management District.

For PM₁₀, the maximum exposed residential receptor concentrations did not exceed their respective thresholds for the 24-hour and annual averaging times. PM_{2.5} concentrations for the 24-hour averaging were also predicted to be within acceptable limits. Table 8 presents the maximum predicted particulate concentrations for each corresponding residential floor level.

Table 8
Maximum Residential Receptor / PM₁₀ and PM_{2.5}

Floor Level	Pollutant / Averaging Time		
	PM ₁₀ 24 Hour	PM ₁₀ Annual	PM _{2.5} 24-Hour
2	1.28317	0.89119	0.41390
3	1.22433	0.83996	0.39536
4	1.17759	0.76456	0.38029
5	1.08146	0.67868	0.34940
6	0.93163	0.58211	0.30110

Note: Concentrations are expressed in micrograms per cubic meter (µg/m³).

The maximum modeled 1-hour concentration for CO of 0.02791 parts per million (ppm) (31.96469 µg/m³) when added to an existing background concentration of 3.2 ppm, will not cause an exceedance of the CAAQS of 20 ppm. For the 8-hour averaging time, the maximum predicted concentration of 0.01402 ppm, (16.05139 µg/m³) when added to an existing background level of 2.0 ppm, does not cause an exceedance of the CAAQS of 9 ppm.

For NO₂, the maximum 1-hour concentration of 0.00196 ppm (3.69553 µg/m³) was predicted. This concentration, when added to a background concentration of 0.0821 ppm, will not cause an exceedance of the CAAQS of 0.18 ppm.

7.0 CONCLUSION

In comparison to the threshold level referenced in Section 6.1, carcinogenic risks were predicted to be within acceptable limits for the 30-year and 9-year exposure scenarios. For chronic noncarcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for all exposure scenarios. For short duration exposures, the hazard indices for the identified averaging times did not exceed unity. Therefore, noncarcinogenic hazards were predicted to be within acceptable limits.

For criteria pollutants, the assessment revealed that maximum predicted concentrations for all identified compounds were predicted to be within acceptable limits. As such, no impacts are anticipated for residents, commercial patrons and individuals accessing landscaped paseos, courtyards and proposed outdoor amenities.

Results of the assessment demonstrate that enhanced air filtration for residential occupancies is not warranted. The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Standard 52.2 provides recommended efficiencies associated with various applications and performance standards and should be consulted to identify the appropriate filter design efficiency. For residential applications, ASHRAE identifies filter efficiencies as minimum, better and superior with associated Minimum Efficiency Reporting Value (MERV) ratings ranging from 1 to 12 which will principally serve to reduce particulates and related material (e.g., dust/dander etc.) generated within the building

structure. Table 9 presents an excerpt from the ASHRAE Standard 52.2 which identifies the recommended MERV filtration applications for various residential occupancies.

Table 9
ASHRAE Application Guidelines

Std. 52.2 Minimum Efficiency Reporting Value (MERV)	Application Guidelines		
	Typical Controlled Contaminant	Typical Applications and Limitations	Typical Air Filter/Cleaner Type
16	0.30 to 1.0 μm Particle Size	Hospital inpatient care	Bag Filters
15	All bacteria	General surgery	Nonsupported (flexible) microfine fiberglass or synthetic media. 300 to 900 mm (12 to 36 in.) deep, 6 to 12 pockets.
14	Most tobacco smoke	Smoking lounges	Box Filters
13	Droplet nuclei (sneeze)	Superior commercial buildings	Rigid style cartridge filters 150 to 300 mm (6 to 12 in.) deep may use lofted (air laid) or paper (wet laid) media.
	Cooking oil		
	Most smoke		
	Insecticide dust		
	Copier toner		
	Most face powder		
	Most paint pigments		
12	1.0 to 3.0 μm Particle Size	Superior residential	Bag Filters
11	Legionella	Better commercial buildings	Nonsupported (flexible) microfine fiberglass or synthetic media. 300 to 900 mm (12 to 36 in.) deep, 6 to 12 pockets.
10	Humidifier dust	Hospital laboratories	Box Filters
9	Lead dust		Rigid style cartridge filters 150 to 300 mm (6 to 12 in.) deep may use lofted (air laid) or paper (wet laid) media.
	Milled flour		
	Coal dust		
	Auto emissions		
	Nebulizer drops		
	Welding fumes		
8	3.0 to 10.0 μm Particle Size	Commercial buildings	Pleated Filters
7	Mold	Better residential	Disposable, extended surface, 25 to 125 mm (1 to 5 in.) thick with cotton-polyester blend media, cardboard frame.
6	Spores	Industrial workplaces	Cartridge Filters
5	Hair spray	Paint booth inlet air	Graded density viscous coated cube or pocket filters, synthetic media.
	Fabric protector		Throwaway
	Dusting aids		Disposable synthetic media panel filters.
	Cement dust		
	Pudding mix		
	Snuff		
	Powdered milk		
4	>10.0 μm Particle Size	Minimum filtration	Throwaway
3	Pollen	Residential	Disposable fiberglass or synthetic panel filters
2	Spanish moss	Window air conditioners	Washable
1	Dust mites		Aluminum mesh, latex coated animal hair, or foam rubber panel filters
	Sanding dust		Electrostatic
	Spray paint dust		Self charging (passive) woven polycarbonate panel filter
	Textile fibers		
	Carpet fibers		

Note: A MERV for other than HEPA/ULPA filters also includes a test airflow rate, but it is not shown here because it has no significance for the purposes of this table.

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APPENDIX A

Risk Calculation Worksheets

Table A1
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
30 Year Exposure Scenario / Maximum Residential Receptor at Second Floor Level

Source	Concentration		Weight Fraction	Contaminant	Carcinogenic Risk			Noncarcinogenic Hazards / Toxicological Endpoints*									
	(ug/m3)	(mg/m3)			URF (ug/m3)	CPF (mg/kg/day)	RISK (h)	REL (ug/m3)	RfD (mg/kg/day)	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(b)	(c)			(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Freeway	0.02454	2.5E-05	4.91E-01	Benzene	2.9E-05	1.0E-01	1.4E-07	3.0E+00	8.6E-04			3.9E-03					
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	1.9E-08	9.0E+00	2.6E-03	8.3E-04							
			1.09E-01	1,3-Butadiene	1.7E-04	6.0E-01	1.9E-07	2.0E+00	5.7E-04							1.3E-03	
			5.70E-02	Acetaldehyde	2.7E-06	1.0E-02	1.6E-09	1.4E+02	4.0E-02	9.6E-06							
			2.60E-02	Acrolein				3.5E-01	1.0E-04	1.7E-03							
	0.00455	4.6E-06	1.00E+00	Diesel Particulates	3.0E-04	1.1E+00	5.6E-07	5.0E+00	1.4E-03	8.7E-04							
Total					9.1E-07			3.5E-03			0.0E+00	3.9E-03	0.0E+00	0.0E+00	0.0E+00	1.3E-03	0.0E+00

* Key to Toxicological Endpoints

RESP Respiratory System
CNS/PNS Central/Peripheral Nervous System
CV/BL Cardiovascular/Blood System
IMMUN Immune System
KIDN Kidney
GI/LV Gastrointestinal System/Liver
REPRO Reproductive System (e.g., teratogenic and developmental effects)
EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	30
inhalation rate (m3/day)	20
average body weight (kg)	70
averaging time _(cancer) (days)	25550
averaging time _(noncancer) (days)	10950

Table A2
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
30 Year Exposure Scenario / Maximum Residential Receptor at Third Floor Level

Source	Concentration		Weight Fraction	Contaminant	Carcinogenic Risk			Noncarcinogenic Hazards / Toxicological Endpoints*									
	(ug/m3)	(mg/m3)			URF (ug/m3)	CPF (mg/kg/day)	RISK (h)	REL (ug/m3)	RfD (mg/kg/day)	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(b)	(c)			(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Freeway	0.02302	2.3E-05	4.91E-01	Benzene	2.9E-05	1.0E-01	1.3E-07	3.0E+00	8.6E-04			3.6E-03					
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	1.8E-08	9.0E+00	2.6E-03	7.8E-04							
			1.09E-01	1,3-Butadiene	1.7E-04	6.0E-01	1.8E-07	2.0E+00	5.7E-04							1.2E-03	
			5.70E-02	Acetaldehyde	2.7E-06	1.0E-02	1.5E-09	1.4E+02	4.0E-02	9.0E-06							
			2.60E-02	Acrolein				3.5E-01	1.0E-04	1.6E-03							
	0.00427	4.3E-06	1.00E+00	Diesel Particulates	3.0E-04	1.1E+00	5.3E-07	5.0E+00	1.4E-03	8.2E-04							
Total					8.6E-07			3.2E-03			0.0E+00	3.6E-03	0.0E+00	0.0E+00	0.0E+00	1.2E-03	0.0E+00

* Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g., teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	30
inhalation rate (m3/day)	20
average body weight (kg)	70
averaging time _(cancer) (days)	25550
averaging time _(noncancer) (days)	10950

Table A3
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
30 Year Exposure Scenario / Maximum Residential Receptor at Fourth Floor Level

Source	Concentration		Weight Fraction	Contaminant	Carcinogenic Risk			Noncarcinogenic Hazards / Toxicological Endpoints*									
	(ug/m3)	(mg/m3)			URF (ug/m3)	CPF (mg/kg/day)	RISK	REL (ug/m3)	RfD (mg/kg/day)	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(b)	(c)			(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Freeway	0.02081	2.1E-05	4.91E-01	Benzene	2.9E-05	1.0E-01	1.2E-07	3.0E+00	8.6E-04			3.3E-03					
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	1.6E-08	9.0E+00	2.6E-03	7.0E-04							
			1.09E-01	1,3-Butadiene	1.7E-04	6.0E-01	1.6E-07	2.0E+00	5.7E-04							1.1E-03	
			5.70E-02	Acetaldehyde	2.7E-06	1.0E-02	1.4E-09	1.4E+02	4.0E-02	8.1E-06							
			2.60E-02	Acrolein				3.5E-01	1.0E-04	1.5E-03							
	0.00386	3.9E-06	1.00E+00	Diesel Particulates	3.0E-04	1.1E+00	4.8E-07	5.0E+00	1.4E-03	7.4E-04							
Total					7.7E-07			2.9E-03			0.0E+00	3.3E-03	0.0E+00	0.0E+00	0.0E+00	1.1E-03	0.0E+00

* Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g., teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	30
inhalation rate (m3/day)	20
average body weight (kg)	70
averaging time _(cancer) (days)	25550
averaging time _(noncancer) (days)	10950

Table A4
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
30 Year Exposure Scenario / Maximum Residential Receptor at Fifth Floor Level

Source	Concentration		Weight Fraction	Contaminant	Carcinogenic Risk			Noncarcinogenic Hazards / Toxicological Endpoints*									
	(ug/m3)	(mg/m3)			URF (ug/m3)	CPF (mg/kg/day)	RISK (h)	REL (ug/m3)	RfD (mg/kg/day)	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(b)	(c)			(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Freeway	0.01831	1.8E-05	4.91E-01	Benzene	2.9E-05	1.0E-01	1.1E-07	3.0E+00	8.6E-04			2.9E-03					
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	1.4E-08	9.0E+00	2.6E-03	6.2E-04							
			1.09E-01	1,3-Butadiene	1.7E-04	6.0E-01	1.4E-07	2.0E+00	5.7E-04							9.6E-04	
			5.70E-02	Acetaldehyde	2.7E-06	1.0E-02	1.2E-09	1.4E+02	4.0E-02	7.1E-06							
			2.60E-02	Acrolein				3.5E-01	1.0E-04	1.3E-03							
	0.00339	3.4E-06	1.00E+00	Diesel Particulates	3.0E-04	1.1E+00	4.2E-07	5.0E+00	1.4E-03	6.5E-04							
Total					6.8E-07			2.6E-03			0.0E+00	2.9E-03	0.0E+00	0.0E+00	0.0E+00	9.6E-04	0.0E+00

* Key to Toxicological Endpoints

RESP Respiratory System
CNS/PNS Central/Peripheral Nervous System
CV/BL Cardiovascular/Blood System
IMMUN Immune System
KIDN Kidney
GI/LV Gastrointestinal System/Liver
REPRO Reproductive System (e.g., teratogenic and developmental effects)
EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

 exposure frequency (days/year) 350
 exposure duration (years) 30
 inhalation rate (m3/day) 20
 average body weight (kg) 70
 averaging time_(cancer) (days) 25550
 averaging time_(noncancer) (days) 10950

Table A5
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
30 Year Exposure Scenario / Maximum Residential Receptor at Sixth Floor Level

Source	Concentration		Weight Fraction	Contaminant	Carcinogenic Risk			Noncarcinogenic Hazards / Toxicological Endpoints*									
	(ug/m3)	(mg/m3)			URF (ug/m3)	CPF (mg/kg/day)	RISK (h)	REL (ug/m3)	RfD (mg/kg/day)	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(b)	(c)			(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Freeway	0.01552	1.6E-05	4.91E-01	Benzene	2.9E-05	1.0E-01	9.1E-08	3.0E+00	8.6E-04			2.4E-03					
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	1.2E-08	9.0E+00	2.6E-03	5.2E-04							
			1.09E-01	1,3-Butadiene	1.7E-04	6.0E-01	1.2E-07	2.0E+00	5.7E-04							8.1E-04	
			5.70E-02	Acetaldehyde	2.7E-06	1.0E-02	1.0E-09	1.4E+02	4.0E-02	6.1E-06							
			2.60E-02	Acrolein				3.5E-01	1.0E-04	1.1E-03							
	0.00287	2.9E-06	1.00E+00	Diesel Particulates	3.0E-04	1.1E+00	3.5E-07	5.0E+00	1.4E-03	5.5E-04							
Total					5.8E-07			2.2E-03			0.0E+00	2.4E-03	0.0E+00	0.0E+00	0.0E+00	8.1E-04	0.0E+00

* Key to Toxocological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g., teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	30
inhalation rate (m3/day)	20
average body weight (kg)	70
averaging time _(cancer) (days)	25550
averaging time _(noncancer) (days)	10950

Table A6
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
9 Year Exposure Scenario / Maximum Residential Receptor at Second Floor Level

Source	Concentration		Weight Fraction	Contaminant	Carcinogenic Risk			Noncarcinogenic Hazards / Toxicological Endpoints*									
	(ug/m3)	(mg/m3)			URF	CPF	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(b)	(c)			(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Freeway	0.02454	2.5E-05	4.91E-01	Benzene	2.9E-05	1.0E-01	4.3E-08	3.0E+00	8.6E-04			3.9E-03					
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	5.8E-09	9.0E+00	2.6E-03	8.3E-04							
			1.09E-01	1,3-Butadiene	1.7E-04	6.0E-01	5.6E-08	2.0E+00	5.7E-04							1.3E-03	
			5.70E-02	Acetaldehyde	2.7E-06	1.0E-02	4.9E-10	1.4E+02	4.0E-02	9.6E-06							
			2.60E-02	Acrolein				3.5E-01	1.0E-04	1.7E-03							
	0.00455	4.6E-06	1.00E+00	Diesel Particulates	3.0E-04	1.1E+00	1.7E-07	5.0E+00	1.4E-03	8.7E-04							
Total					2.7E-07			3.5E-03			0.0E+00	3.9E-03	0.0E+00	0.0E+00	0.0E+00	1.3E-03	0.0E+00

* Key to Toxicological Endpoints

RESP Respiratory System
CNS/PNS Central/Peripheral Nervous System
CV/BL Cardiovascular/Blood System
IMMUN Immune System
KIDN Kidney
GI/LV Gastrointestinal System/Liver
REPRO Reproductive System (e.g., teratogenic and developmental effects)
EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	9
inhalation rate (m3/day)	20
average body weight (kg)	70
averaging time _(cancer) (days)	25550
averaging time _(noncancer) (days)	3285

Table A7
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
9 Year Exposure Scenario / Maximum Residential Receptor at Third Floor Level

Source	Concentration		Weight Fraction	Contaminant	Carcinogenic Risk			Noncarcinogenic Hazards / Toxicological Endpoints*									
	(ug/m3)	(mg/m3)			URF (ug/m3)	CPF (mg/kg/day)	RISK (h)	REL (ug/m3)	RfD (mg/kg/day)	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(b)	(c)			(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Freeway	0.02302	2.3E-05	4.91E-01	Benzene	2.9E-05	1.0E-01	4.0E-08	3.0E+00	8.6E-04			3.6E-03					
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	5.4E-09	9.0E+00	2.6E-03	7.8E-04							
			1.09E-01	1,3-Butadiene	1.7E-04	6.0E-01	5.3E-08	2.0E+00	5.7E-04							1.2E-03	
			5.70E-02	Acetaldehyde	2.7E-06	1.0E-02	4.6E-10	1.4E+02	4.0E-02	9.0E-06							
			2.60E-02	Acrolein				3.5E-01	1.0E-04	1.6E-03							
	0.00427	4.3E-06	1.00E+00	Diesel Particulates	3.0E-04	1.1E+00	1.6E-07	5.0E+00	1.4E-03	8.2E-04							
Total					2.6E-07			3.2E-03			0.0E+00	3.6E-03	0.0E+00	0.0E+00	0.0E+00	1.2E-03	0.0E+00

* Key to Toxicological Endpoints

RESP Respiratory System
CNS/PNS Central/Peripheral Nervous System
CV/BL Cardiovascular/Blood System
IMMUN Immune System
KIDN Kidney
GI/LV Gastrointestinal System/Liver
REPRO Reproductive System (e.g., teratogenic and developmental effects)
EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	9
inhalation rate (m3/day)	20
average body weight (kg)	70
averaging time _(cancer) (days)	25550
averaging time _(noncancer) (days)	3285

Table A8
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
9 Year Exposure Scenario / Maximum Residential Receptor at Fourth Floor Level

Source	Concentration		Weight Fraction	Contaminant	Carcinogenic Risk			Noncarcinogenic Hazards / Toxicological Endpoints*									
	(ug/m3)	(mg/m3)			URF	CPF	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(b)	(c)			(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Freeway	0.02081	2.1E-05	4.91E-01	Benzene	2.9E-05	1.0E-01	3.7E-08	3.0E+00	8.6E-04			3.3E-03					
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	4.9E-09	9.0E+00	2.6E-03	7.0E-04							
			1.09E-01	1,3-Butadiene	1.7E-04	6.0E-01	4.8E-08	2.0E+00	5.7E-04							1.1E-03	
			5.70E-02	Acetaldehyde	2.7E-06	1.0E-02	4.2E-10	1.4E+02	4.0E-02	8.1E-06							
			2.60E-02	Acrolein				3.5E-01	1.0E-04	1.5E-03							
	0.00386	3.9E-06	1.00E+00	Diesel Particulates	3.0E-04	1.1E+00	1.4E-07	5.0E+00	1.4E-03	7.4E-04							
Total					2.3E-07			2.9E-03			0.0E+00	3.3E-03	0.0E+00	0.0E+00	0.0E+00	1.1E-03	0.0E+00

* Key to Toxicological Endpoints

RESP Respiratory System
CNS/PNS Central/Peripheral Nervous System
CV/BL Cardiovascular/Blood System
IMMUN Immune System
KIDN Kidney
GI/LV Gastrointestinal System/Liver
REPRO Reproductive System (e.g., teratogenic and developmental effects)
EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	9
inhalation rate (m3/day)	20
average body weight (kg)	70
averaging time _(cancer) (days)	25550
averaging time _(noncancer) (days)	3285

Table A9
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
9 Year Exposure Scenario / Maximum Residential Receptor at Fifth Floor Level

Source	Concentration		Weight Fraction	Contaminant	Carcinogenic Risk			Noncarcinogenic Hazards / Toxicological Endpoints*									
	(ug/m3)	(mg/m3)			URF (ug/m3)	CPF (mg/kg/day)	RISK (h)	REL (ug/m3)	RfD (mg/kg/day)	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(b)	(c)			(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Freeway	0.01831	1.8E-05	4.91E-01	Benzene	2.9E-05	1.0E-01	3.2E-08	3.0E+00	8.6E-04			2.9E-03					
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	4.3E-09	9.0E+00	2.6E-03	6.2E-04							
			1.09E-01	1,3-Butadiene	1.7E-04	6.0E-01	4.2E-08	2.0E+00	5.7E-04							9.6E-04	
			5.70E-02	Acetaldehyde	2.7E-06	1.0E-02	3.7E-10	1.4E+02	4.0E-02	7.1E-06							
			2.60E-02	Acrolein				3.5E-01	1.0E-04	1.3E-03							
	0.00339	3.4E-06	1.00E+00	Diesel Particulates	3.0E-04	1.1E+00	1.3E-07	5.0E+00	1.4E-03	6.5E-04							
Total					2.0E-07			2.6E-03			0.0E+00	2.9E-03	0.0E+00	0.0E+00	0.0E+00	9.6E-04	0.0E+00

* Key to Toxicological Endpoints

RESP Respiratory System
CNS/PNS Central/Peripheral Nervous System
CV/BL Cardiovascular/Blood System
IMMUN Immune System
KIDN Kidney
GI/LV Gastrointestinal System/Liver
REPRO Reproductive System (e.g., teratogenic and developmental effects)
EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	9
inhalation rate (m3/day)	20
average body weight (kg)	70
averaging time _(cancer) (days)	25550
averaging time _(noncancer) (days)	3285

Table A10
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
9 Year Exposure Scenario / Maximum Residential Receptor at Sixth Floor Level

Source	Concentration		Weight Fraction	Contaminant	Carcinogenic Risk			Noncarcinogenic Hazards / Toxicological Endpoints*									
	(ug/m3)	(mg/m3)			URF (ug/m3)	CPF (mg/kg/day)	RISK (h)	REL (ug/m3)	RfD (mg/kg/day)	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(b)	(c)			(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Freeway	0.01552	1.6E-05	4.91E-01	Benzene	2.9E-05	1.0E-01	2.7E-08	3.0E+00	8.6E-04			2.4E-03					
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	3.6E-09	9.0E+00	2.6E-03	5.2E-04							
			1.09E-01	1,3-Butadiene	1.7E-04	6.0E-01	3.5E-08	2.0E+00	5.7E-04							8.1E-04	
			5.70E-02	Acetaldehyde	2.7E-06	1.0E-02	3.1E-10	1.4E+02	4.0E-02	6.1E-06							
			2.60E-02	Acrolein				3.5E-01	1.0E-04	1.1E-03							
	0.00287	2.9E-06	1.00E+00	Diesel Particulates	3.0E-04	1.1E+00	1.1E-07	5.0E+00	1.4E-03	5.5E-04							
Total					1.7E-07			2.2E-03			0.0E+00	2.4E-03	0.0E+00	0.0E+00	0.0E+00	8.1E-04	0.0E+00

* Key to Toxicological Endpoints

RESP Respiratory System
CNS/PNS Central/Peripheral Nervous System
CV/BL Cardiovascular/Blood System
IMMUN Immune System
KIDN Kidney
GI/LV Gastrointestinal System/Liver
REPRO Reproductive System (e.g., teratogenic and developmental effects)
EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	9
inhalation rate (m3/day)	20
average body weight (kg)	70
averaging time _(cancer) (days)	25550
averaging time _(noncancer) (days)	3285

Table A11
Quantification of Noncarcinogenic Acute Hazards
1-Hour Exposure Scenario / Maximum Exposed Receptor

Source	Concentration (ug/m3)	Weight Fraction	Contaminant	Noncarcinogenic Hazards / Toxicological Endpoints*								
				REL (ug/m3)	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Freeway TOG	0.26442	4.91E-01	Benzene	2.7E+01			4.8E-03	4.8E-03			4.8E-03	
		3.17E-01	Formaldehyde	5.5E+01								1.5E-03
		1.09E-01	1,3-Butadiene	6.6E+02							4.4E-05	
		5.70E-02	Acetaldehyde	4.7E+02	3.2E-05							3.2E-05
		2.60E-02	Acrolein	2.5E+00	2.7E-03							2.7E-03
Freeway Diesel/TOG	0.04862	8.20E-02	Benzene	2.7E+01				1.5E-04			1.5E-04	
		6.07E-01	Formaldehyde	5.5E+01								5.4E-04
		8.00E-03	1,3-Butadiene	6.6E+02							5.9E-07	
		3.03E-01	Acetaldehyde	4.7E+02	3.1E-05							3.1E-05
Total					2.8E-03	0.0E+00	4.8E-03	5.0E-03	0.0E+00	0.0E+00	5.0E-03	4.9E-03

* Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g., teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Table A12
Quantification of Noncarcinogenic Acute Hazards
8-Hour Exposure Scenario / Maximum Exposed Receptor

Source	Concentration (ug/m3)	Weight Fraction	Contaminant	Noncarcinogenic Hazards / Toxicological Endpoints*								
				REL (ug/m3)	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Freeway TOG	0.05457	4.91E-01	Benzene	3.0E+00			8.9E-03					
		3.17E-01	Formaldehyde	9.0E+00	1.9E-03						6.6E-04	
		1.09E-01	1,3-Butadiene	9.0E+00								
		5.70E-02	Acetaldehyde	3.0E+02	1.0E-05							
		2.60E-02	Acrolein	7.0E-01	2.0E-03							
Freeway Diesel/TOG	0.00522	8.20E-02	Benzene	3.0E+00			1.4E-04					
		6.07E-01	Formaldehyde	9.0E+00	3.5E-04						4.6E-06	
		8.00E-03	1,3-Butadiene	9.0E+00								
		3.03E-01	Acetaldehyde	3.0E+02	5.3E-06							
Total					4.3E-03	0.0E+00	9.1E-03	0.0E+00	0.0E+00	0.0E+00	6.7E-04	0.0E+00

* Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g., teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

APPENDIX B

Emission Rate Calculation Worksheets

EMFAC2017 Worksheet
(5 mph)

EMFAC2017 Emission Rates

Region Type: County

Region: Los Angeles (SC)

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Pollutant Classification: Criteria

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	CO_RUNEX (gms/mile)	CO_RUNEX_AVE (gms/mile)	NOX_RUNEX (gms/mile)	NOx_RUNEX_AVE (gms/mile)	PM10_RUNEX (gms/mile)	PM10_RUNEX_AVE (gms/mile)	PM10_PMTW (gms/mile)	PM10_PMTW_AVE (gms/mile)	PM10_PMBW (gms/mile)	PM10_PMBW_AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	5	38501.07	0.0051	3.054832432	0.01559609	0.111547234	0.00056949	0.020258971	0.00010343	0.0080	0.00004084	0.03675	0.000187623
Los Angeles	2024	Annual	LDA	GAS	Aggregated	5	4021900.07	0.5333	1.062914331	0.56687215	0.051681978	0.02756297	0.009017787	0.00480936	0.0080	0.00426655	0.03675	0.019599464
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	5	234.77	0.0000	3.751986044	0.00011681	0.715262502	0.00002227	0.462720842	0.00001441	0.0080	0.00000025	0.03675	0.000001144
Los Angeles	2024	Annual	LDT1	GAS	Aggregated	5	486400.77	0.0645	2.079732657	0.13413970	0.156150966	0.01007151	0.012290465	0.00079272	0.0080	0.00051599	0.03675	0.002370321
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	5	10554.81	0.0014	2.348317419	0.00328672	0.14776692	0.00020682	0.01201967	0.00001682	0.0080	0.00001120	0.03675	0.000051436
Los Angeles	2024	Annual	LDT2	GAS	Aggregated	5	1423190.93	0.1887	1.49355602	0.28186443	0.109474587	0.02066008	0.009579481	0.00180784	0.0080	0.00150976	0.03675	0.006935473
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	5	73357.20	0.0097	2.762562412	0.02687264	0.844609713	0.00821589	0.034860039	0.00033910	0.0120	0.00011673	0.07644	0.000743565
Los Angeles	2024	Annual	LHDT1	GAS	Aggregated	5	105026.62	0.0139	1.611628675	0.02244502	0.231566229	0.00322500	0.007933856	0.00011049	0.0080	0.00011142	0.07644	0.001064574
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	5	29768.24	0.0039	2.808360518	0.01108566	0.841261753	0.00332078	0.041467325	0.00016369	0.0120	0.00004737	0.08918	0.000352027
Los Angeles	2024	Annual	LHDT2	GAS	Aggregated	5	18080.14	0.0024	0.983084561	0.00235694	0.255444365	0.00061243	0.007380496	0.00001769	0.0080	0.00001918	0.08918	0.000213808
Los Angeles	2024	Annual	MCY	GAS	Aggregated	5	190348.39	0.0252	42.42409779	1.07082227	1.464227197	0.03695841	0.012415468	0.00031338	0.0040	0.00010096	0.01176	0.000296833
Los Angeles	2024	Annual	MDV	DSL	Aggregated	5	23002.45	0.0031	3.201120504	0.00976409	0.103074512	0.00031440	0.011073104	0.00003378	0.0080	0.00002440	0.03675	0.000112095
Los Angeles	2024	Annual	MDV	GAS	Aggregated	5	941489.74	0.1248	1.715739878	0.21420155	0.137179251	0.01712614	0.009820692	0.00122606	0.0080	0.00099876	0.03675	0.004588054
Los Angeles	2024	Annual	MH	DSL	Aggregated	5	6460.41	0.0009	2.088762984	0.00178939	11.72238209	0.01004226	0.155199538	0.00013296	0.0160	0.00001371	0.13034	0.000111659
Los Angeles	2024	Annual	MH	GAS	Aggregated	5	18822.07	0.0025	2.411081855	0.00601776	0.38471275	0.00096020	0.008287398	0.00002068	0.0120	0.00002995	0.13034	0.000325312
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	5	67593.21	0.0090	0.779480052	0.00698656	6.357614616	0.05698399	0.005977983	0.00005358	0.0120	0.00010756	0.13034	0.001168252
Los Angeles	2024	Annual	MHDT	GAS	Aggregated	5	14759.51	0.0020	2.14126729	0.00419082	0.536437515	0.00104990	0.006962963	0.00001363	0.0120	0.00002349	0.13034	0.000255097
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	5	58992.86	0.0078	2.136013727	0.01670933	13.22310332	0.10343998	0.014282042	0.00011172	0.0360	0.00028162	0.06174	0.000482972
Los Angeles	2024	Annual	HHDT	GAS	Aggregated	5	52.05	0.0000	61.34839905	0.00042339	5.355495972	0.00003696	0.007446792	0.00000005	0.0200	0.00000014	0.06174	0.000000426
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	5	3186.17	0.0004	1.29571831	0.00054744	8.765753854	0.00370351	0.007319034	0.00000309	0.0120	0.00000507	0.13034	0.000055068
Los Angeles	2024	Annual	OBUS	GAS	Aggregated	5	3958.89	0.0005	2.367763769	0.00124299	0.633295598	0.00033246	0.006402996	0.00000336	0.0120	0.00000630	0.13034	0.000068424
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	5	3527.52	0.0005	1.221314341	0.00057128	14.98196154	0.00700799	0.119572773	0.00005593	0.0120	0.00000561	0.74480	0.000348389
Los Angeles	2024	Annual	SBUS	GAS	Aggregated	5	1584.68	0.0002	1.512913296	0.00031791	0.550913049	0.00011577	0.005597686	0.00000118	0.0080	0.00000168	0.74480	0.000156508
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	5	10.14	0.0000	0.403615955	0.00000054	2.470588676	0.00000332	0.007138464	0.00000001	0.0360	0.00000005	0.06175	0.000000083
Los Angeles	2024	Annual	UBUS	GAS	Aggregated	5	466.05	0.0001	0.434563691	0.00002686	0.305219298	0.00001886	0.006651863	0.00000041	0.0113	0.00000070	0.12357	0.000007637
							7541269	1.0		2.398	0.313		0.0101			0.008		0.039

EMFAC2017 Emission Rates

Region Type: County

Region: Los Angeles (SC)

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Pollutant Classification: TOG GAS

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	TOG_RUNEX (gms/mile)	TOG_RUNEX_AVE (gms/mile)
Los Angeles	2024	Annual	LDA	GAS	Aggregated	5	4021900.07	0.5566	0.071938744	0.0400
Los Angeles	2024	Annual	LDT1	GAS	Aggregated	5	486400.77	0.0673	0.189495844	0.0128
Los Angeles	2024	Annual	LDT2	GAS	Aggregated	5	1423190.93	0.1970	0.125176921	0.0247
Los Angeles	2024	Annual	LHDT1	GAS	Aggregated	5	105026.62	0.0145	0.19932861	0.0029
Los Angeles	2024	Annual	LHDT2	GAS	Aggregated	5	18080.14	0.0025	0.148536455	0.0004
Los Angeles	2024	Annual	MCY	GAS	Aggregated	5	190348.39	0.0263	15.37561376	0.4050
Los Angeles	2024	Annual	MDV	GAS	Aggregated	5	941489.74	0.1303	0.1609210	0.0210
Los Angeles	2024	Annual	MH	GAS	Aggregated	5	18822.07	0.0026	0.302580381	0.0008
Los Angeles	2024	Annual	MHDT	GAS	Aggregated	5	14759.51	0.0020	0.404566544	0.0008
Los Angeles	2024	Annual	HHDT	GAS	Aggregated	5	52.05	0.0000	3.75637191	0.0000
Los Angeles	2024	Annual	OBUS	GAS	Aggregated	5	3958.89	0.0005	0.44783406	0.0002
Los Angeles	2024	Annual	SBUS	GAS	Aggregated	5	1584.68	0.0002	0.31816535	0.0001
Los Angeles	2022	Annual	UBUS	GAS	Aggregated	5	466.05	0.0001	0.098094301	0.0000
							7226080	1.0	0.509	

EMFAC2017 Worksheet
(5 mph)

PM2_5_RUNEX (gms/mile)	PM2_5_RUNEX_AVE (gms/mile)	PM2_5_PMTW (gms/mile)	PM2_5_PMTW_AVE (gms/mile)	PM2_5_PMBW (gms/mile)	PM2_5_PMBW_AVE (gms/mile)
0.019382577	0.000098955	0.0020	0.000010211	0.01575	0.000080410
0.008291523	0.004422024	0.0020	0.001066638	0.01575	0.008399770
0.442703743	0.000013782	0.0020	0.000000062	0.01575	0.000000490
0.011300746	0.000728882	0.0020	0.000128997	0.01575	0.001015852
0.011499704	0.000016095	0.0020	0.000002799	0.01575	0.000022044
0.008808014	0.001662252	0.0020	0.000377441	0.01575	0.002972346
0.033352009	0.000324429	0.0030	0.000029182	0.03276	0.000318671
0.007294888	0.000101595	0.0020	0.000027854	0.03276	0.000456246
0.039673467	0.000156606	0.0030	0.000011842	0.03822	0.000150869
0.006786094	0.000016270	0.0020	0.000004795	0.03822	0.000091632
0.011585016	0.000292416	0.0010	0.000025241	0.00504	0.000127214
0.010594087	0.000032314	0.0020	0.000006100	0.01575	0.000048041
0.009030032	0.001127354	0.0020	0.000249690	0.01575	0.001966309
0.148485675	0.000127204	0.0040	0.000003427	0.05586	0.000047854
0.007619956	0.000019018	0.0030	0.000007488	0.05586	0.000139420
0.005719378	0.000051263	0.0030	0.000026889	0.05586	0.000500679
0.006402187	0.000012530	0.0030	0.000005871	0.05586	0.000109327
0.013664208	0.000106891	0.0090	0.000070404	0.02646	0.000206988
0.006847051	0.000000047	0.0050	0.000000035	0.02646	0.000000183
0.007002415	0.000002959	0.0030	0.000001267	0.05586	0.000023601
0.005887318	0.000003091	0.0030	0.000001575	0.05586	0.000029324
0.114400108	0.000053512	0.0030	0.000001403	0.31920	0.000149310
0.005146865	0.000001082	0.0020	0.000000420	0.31920	0.000067075
0.006829657	0.000000009	0.0090	0.000000012	0.02646	0.000000036
0.006116142	0.000000378	0.0028	0.000000175	0.05296	0.000003273
0.0094			0.002		0.017

EMFAC2017 Worksheet
(5 mph)

EMFAC2017 Emission Rates
Region Type: County
Region: Los Angeles (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Pollutant Classification: TOG DSL

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	TOG_RUNEX (gms/mile)	TOG_RUNEX AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	5	38501.07	0.1222	0.178790185	0.0218
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	5	234.77	0.0007	0.797873866	0.0006
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	5	10554.81	0.0335	0.293572346	0.0098
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	5	73357.20	0.2327	0.821265743	0.1911
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	5	29768.24	0.0944	0.824743392	0.0779
Los Angeles	2024	Annual	MDV	DSL	Aggregated	5	23002.45	0.0730	0.174670651	0.0127
Los Angeles	2024	Annual	MH	DSL	Aggregated	5	6460.41	0.0205	0.955314603	0.0196
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	5	67593.21	0.2145	0.065129254	0.0140
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	5	58992.86	0.1872	0.155113088	0.0290
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	5	3186.17	0.0101	0.090712629	0.0009
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	5	3527.52	0.0112	0.740034922	0.0083
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	5	10.14	0.0000	0.185577815	0.0000
							315189	1.0	0.386	

EMFAC2017 Emission Rates
Region Type: County
Region: Los Angeles (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Pollutant Classification: DSL Particulate

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	PM10_RUNEX (gms/mile)	PM10_RUNEX AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	5	38501.07	0.1222	0.0202590	0.0025
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	5	234.77	0.0007	0.462720842	0.0003
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	5	10554.81	0.0335	0.01201967	0.0004
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	5	73357.20	0.2327	0.034860	0.0081
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	5	29768.24	0.0944	0.041467325	0.0039
Los Angeles	2024	Annual	MDV	DSL	Aggregated	5	23002.45	0.0730	0.011073104	0.0008
Los Angeles	2024	Annual	MH	DSL	Aggregated	5	6460.41	0.0205	0.155199538	0.0032
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	5	67593.21	0.2145	0.005977983	0.0013
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	5	58992.86	0.1872	0.0142820	0.0027
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	5	3186.17	0.0101	0.007319034	0.0001
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	5	3527.52	0.0112	0.119572773	0.0013
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	5	10.14	0.0000	0.007138464	0.0000
							315189	1.0	0.025	

EMFAC2017 Worksheet
(45 mph)

EMFAC2017 Emission Rates

Region Type: County

Region: Los Angeles (SC)

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Pollutant Classification: Criteria

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	CO_RUNEX (gms/mile)	CO_RUNEX_AVE (gms/mile)	NOX_RUNEX (gms/mile)	NOx_RUNEX_AVE (gms/mile)	PM10_RUNEX (gms/mile)	PM10_RUNEX_AVE (gms/mile)	PM10_PMTW (gms/mile)	PM10_PMTW_AVE (gms/mile)	PM10_PMBW (gms/mile)	PM10_PMBW_AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	45	38501.07	0.0051	0.131548446	0.00067161	0.047821661	0.00024415	0.005109219	0.00002608	0.0080	0.00004084	0.03675	0.000187623
Los Angeles	2024	Annual	LDA	GAS	Aggregated	45	4021900.07	0.5333	0.536018538	0.28586874	0.025927282	0.01382751	0.000998931	0.00053275	0.0080	0.00426655	0.03675	0.019599464
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	45	234.77	0.0000	0.792440833	0.00002467	0.962318682	0.00002996	0.091725551	0.00000286	0.0080	0.00000025	0.03675	0.000001144
Los Angeles	2024	Annual	LDT1	GAS	Aggregated	45	486400.77	0.0645	0.980823919	0.06326170	0.073274072	0.00472607	0.001433172	0.00009244	0.0080	0.00051599	0.03675	0.002370321
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	45	10554.81	0.0014	0.089057591	0.00012465	0.030892222	0.00004324	0.004117562	0.00000576	0.0080	0.00001120	0.03675	0.000051436
Los Angeles	2024	Annual	LDT2	GAS	Aggregated	45	1423190.93	0.1887	0.738598419	0.13938856	0.053206571	0.01004116	0.00107071	0.00020206	0.0080	0.00150976	0.03675	0.006935473
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	45	73357.20	0.0097	0.203475311	0.00197929	0.834756312	0.00812004	0.009709523	0.00009445	0.0120	0.00011673	0.07644	0.000743565
Los Angeles	2024	Annual	LHDT1	GAS	Aggregated	45	105026.62	0.0139	0.575086685	0.00800918	0.141201021	0.00196649	0.00091312	0.00001272	0.0080	0.00011142	0.07644	0.001064574
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	45	29768.24	0.0039	0.201473658	0.00079529	0.810437965	0.00319910	0.012138046	0.00004791	0.0120	0.00004737	0.08918	0.000352027
Los Angeles	2024	Annual	LHDT2	GAS	Aggregated	45	18080.14	0.0024	0.412748088	0.00098956	0.138452361	0.00033194	0.000826079	0.00000198	0.0080	0.00001918	0.08918	0.000213808
Los Angeles	2024	Annual	MCY	GAS	Aggregated	45	190348.39	0.0252	14.63551581	0.36941354	0.987034485	0.02491364	0.0016382	0.00004135	0.0040	0.00010096	0.01176	0.000296833
Los Angeles	2024	Annual	MDV	DSL	Aggregated	45	23002.45	0.0031	0.123059838	0.00037536	0.029703199	0.00009060	0.00338812	0.00001033	0.0080	0.00002440	0.03675	0.000112095
Los Angeles	2024	Annual	MDV	GAS	Aggregated	45	941489.74	0.1248	0.833936455	0.10411280	0.067966667	0.00848530	0.001105334	0.00013800	0.0080	0.00099876	0.03675	0.004588054
Los Angeles	2024	Annual	MH	DSL	Aggregated	45	6460.41	0.0009	0.179726575	0.00015397	2.660339939	0.00227904	0.052689466	0.00004514	0.0160	0.00001371	0.13034	0.000111659
Los Angeles	2024	Annual	MH	GAS	Aggregated	45	18822.07	0.0025	0.87371469	0.00218068	0.22375967	0.00055848	0.000952011	0.00000238	0.0120	0.00002995	0.13034	0.000325312
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	45	67593.21	0.0090	0.045193173	0.00040507	0.684326598	0.00613369	0.005932396	0.00005317	0.0120	0.00010756	0.13034	0.001168252
Los Angeles	2024	Annual	MHDT	GAS	Aggregated	45	14759.51	0.0020	1.027442744	0.00201088	0.279006366	0.00054606	0.000772462	0.00000151	0.0120	0.00002349	0.13034	0.000255097
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	45	58992.86	0.0078	0.123832759	0.00096870	1.520517724	0.01189451	0.014841681	0.00011610	0.0360	0.00028162	0.06174	0.000482972
Los Angeles	2024	Annual	HHDT	GAS	Aggregated	45	52.05	0.0000	28.87591065	0.00019929	3.124943457	0.00002157	0.000889807	0.00000001	0.0200	0.00000014	0.06174	0.000000426
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	45	3186.17	0.0004	0.073222928	0.00003094	0.931358834	0.00039350	0.009062319	0.00000383	0.0120	0.00000507	0.13034	0.000055068
Los Angeles	2024	Annual	OBUS	GAS	Aggregated	45	3958.89	0.0005	1.115097716	0.00058539	0.337961611	0.00017742	0.000713833	0.00000037	0.0120	0.00000630	0.13034	0.000068424
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	45	3527.52	0.0005	0.159824906	0.00007476	4.843095963	0.00226542	0.025211891	0.00001179	0.0120	0.00000561	0.74480	0.000348389
Los Angeles	2024	Annual	SBUS	GAS	Aggregated	45	1584.68	0.0002	0.772090593	0.00016224	0.280231596	0.00005889	0.000615004	0.00000013	0.0080	0.00000168	0.74480	0.000156508
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	45	10.14	0.0000	0.060611135	0.00000008	0.167500299	0.00000023	0.009637211	0.00000001	0.0360	0.00000005	0.06175	0.000000083
Los Angeles	2024	Annual	UBUS	GAS	Aggregated	45	466.05	0.0001	0.221772483	0.00001371	0.155255156	0.00000959	0.000730824	0.00000005	0.0113	0.00000070	0.12357	0.000007637
							7541269	1.0		0.982		0.100		0.0014		0.008		0.039

EMFAC2017 Emission Rates

Region Type: County

Region: Los Angeles (SC)

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Pollutant Classification: TOG GAS

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	TOG_RUNEX (gms/mile)	TOG_RUNEX_AVE (gms/mile)
Los Angeles	2024	Annual	LDA	GAS	Aggregated	45	4021900.07	0.5566	0.008198449	0.0046
Los Angeles	2024	Annual	LDT1	GAS	Aggregated	45	486400.77	0.0673	0.024022808	0.0016
Los Angeles	2024	Annual	LDT2	GAS	Aggregated	45	1423190.93	0.1970	0.014877595	0.0029
Los Angeles	2024	Annual	LHDT1	GAS	Aggregated	45	105026.62	0.0145	0.0296730	0.0004
Los Angeles	2024	Annual	LHDT2	GAS	Aggregated	45	18080.14	0.0025	0.018938686	0.0000
Los Angeles	2024	Annual	MCY	GAS	Aggregated	45	190348.39	0.0263	2.074618303	0.0546
Los Angeles	2024	Annual	MDV	GAS	Aggregated	45	941489.74	0.1303	0.019354792	0.0025
Los Angeles	2024	Annual	MH	GAS	Aggregated	45	18822.07	0.0026	0.041073991	0.0001
Los Angeles	2024	Annual	MHDT	GAS	Aggregated	45	14759.51	0.0020	0.046380699	0.0001
Los Angeles	2024	Annual	HHDT	GAS	Aggregated	45	52.05	0.0000	0.454174085	0.0000
Los Angeles	2024	Annual	OBUS	GAS	Aggregated	45	3958.89	0.0005	0.051893048	0.0000
Los Angeles	2024	Annual	SBUS	GAS	Aggregated	45	1584.68	0.0002	0.034956049	0.0000
Los Angeles	2024	Annual	UBUS	GAS	Aggregated	45	466.05	0.0001	0.010777381	0.0000
							7226080	1.0		0.067

EMFAC2017 Worksheet
(45 mph)

PM2_5_RUNEX (gms/mile)	PM2_5_RUNEX_AVE (gms/mile)	PM2_5_PMTW (gms/mile)	PM2_5_PMTW_AVE (gms/mile)	PM2_5_PMBW (gms/mile)	PM2_5_PMBW_AVE (gms/mile)
0.004888197	0.000024956	0.0020	0.000010211	0.01575	0.000080410
0.00091848	0.000489843	0.0020	0.001066638	0.01575	0.008399770
0.087757544	0.000002732	0.0020	0.000000062	0.01575	0.000000490
0.001317771	0.000084994	0.0020	0.000128997	0.01575	0.001015852
0.003939438	0.000005514	0.0020	0.000002799	0.01575	0.000022044
0.000984485	0.000185792	0.0020	0.000377441	0.01575	0.002972346
0.009289494	0.000090363	0.0030	0.000029182	0.03276	0.000318671
0.000839581	0.000011693	0.0020	0.000027854	0.03276	0.000456246
0.01161296	0.000045841	0.0030	0.000011842	0.03822	0.000150869
0.000759549	0.000001821	0.0020	0.000004795	0.03822	0.000091632
0.00152958	0.000038608	0.0010	0.000025241	0.00504	0.000127214
0.003241552	0.000009887	0.0020	0.000006100	0.01575	0.000048041
0.001016366	0.000126888	0.0020	0.000249690	0.01575	0.001966309
0.050410143	0.000043185	0.0040	0.000003427	0.05586	0.000047854
0.000875339	0.000002185	0.0030	0.000007488	0.05586	0.000139420
0.005675763	0.000050872	0.0030	0.000026889	0.05586	0.000500679
0.00071025	0.000001390	0.0030	0.000005871	0.05586	0.000109327
0.014199636	0.000111079	0.0090	0.000070404	0.02646	0.000206988
0.000818144	0.000000006	0.0050	0.000000035	0.02646	0.000000183
0.008670287	0.000003663	0.0030	0.000001267	0.05586	0.000023601
0.000656343	0.000000345	0.0030	0.000001575	0.05586	0.000029324
0.024121236	0.000011283	0.0030	0.000001403	0.31920	0.000149310
0.000565473	0.000000119	0.0020	0.000000420	0.31920	0.000067075
0.00922031	0.000000012	0.0090	0.000000012	0.02646	0.000000036
0.000671966	0.000000042	0.0028	0.000000175	0.05296	0.000003273
0.0013			0.002		0.017

EMFAC2017 Worksheet
(45 mph)

EMFAC2017 Emission Rates
Region Type: County
Region: Los Angeles (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Pollutant Classification: TOG DSL

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	TOG_RUNEX (gms/mile)	TOG_RUNEX AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	45	38501.07	0.1222	0.00994595	0.0012
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	45	234.77	0.0007	0.138380137	0.0001
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	45	10554.81	0.0335	0.011384376	0.0004
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	45	73357.20	0.2327	0.047490909	0.0111
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	45	29768.24	0.0944	0.047156392	0.0045
Los Angeles	2024	Annual	MDV	DSL	Aggregated	45	23002.45	0.0730	0.007530154	0.0005
Los Angeles	2024	Annual	MH	DSL	Aggregated	45	6460.41	0.0205	0.046318576	0.0009
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	45	67593.21	0.2145	0.006212531	0.0013
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	45	58992.86	0.1872	0.014927494	0.0028
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	45	3186.17	0.0101	0.008882908	0.0001
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	45	3527.52	0.0112	0.047742431	0.0005
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	45	10.14	0.0000	0.045575897	0.0000
							315189	1.0	0.023	

EMFAC2017 Emission Rates
Region Type: County
Region: Los Angeles (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Pollutant Classification: DSL Particulate

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	PM10_RUNEX (gms/mile)	PM10_RUNEX AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	45	38501.07	0.1222	0.005109219	0.0006
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	45	234.77	0.0007	0.091725551	0.0001
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	45	10554.81	0.0335	0.004117562	0.0001
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	45	73357.20	0.2327	0.009709523	0.0023
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	45	29768.24	0.0944	0.012138046	0.0011
Los Angeles	2024	Annual	MDV	DSL	Aggregated	45	23002.45	0.0730	0.00338812	0.0002
Los Angeles	2024	Annual	MH	DSL	Aggregated	45	6460.41	0.0205	0.052689466	0.0011
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	45	67593.21	0.2145	0.005932396	0.0013
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	45	58992.86	0.1872	0.014841681	0.0028
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	45	3186.17	0.0101	0.009062319	0.0001
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	45	3527.52	0.0112	0.025211891	0.0003
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	45	10.14	0.0000	0.009637211	0.0000
							315189	1.0	0.010	

EMFAC2017 Worksheet
(55 mph)

EMFAC2017 Emission Rates

Region Type: County

Region: Los Angeles (SC)

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Pollutant Classification: Criteria

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	CO_RUNEX (gms/mile)	CO_RUNEX AVE (gms/mile)	NOX_RUNEX (gms/mile)	NOx_RUNEX AVE (gms/mile)	PM10_RUNEX (gms/mile)	PM10_RUNEX AVE (gms/mile)	PM10_PMTW (gms/mile)	PM10_PMTW_AVE (gms/mile)	PM10_PMBW (gms/mile)	PM10_PMBW_AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	55	38501.07	0.0051	0.111544852	0.00056948	0.048498709	0.00024760	0.004992553	0.00002549	0.0080	0.00004084	0.03675	0.000187623
Los Angeles	2024	Annual	LDA	GAS	Aggregated	55	4021900.07	0.5333	0.466649394	0.24887287	0.025879117	0.01380182	0.000980481	0.00052291	0.0080	0.00426655	0.03675	0.019599464
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	55	234.77	0.0000	0.947014349	0.00002948	1.039164639	0.00003235	0.09593812	0.00000299	0.0080	0.00000025	0.03675	0.000001144
Los Angeles	2024	Annual	LDT1	GAS	Aggregated	55	486400.77	0.0645	0.867297109	0.05593939	0.075542764	0.00487240	0.00139417	0.00008992	0.0080	0.00051599	0.03675	0.002370321
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	55	10554.81	0.0014	0.070253949	0.00009833	0.0282000	0.00003947	0.003749171	0.00000525	0.0080	0.00001120	0.03675	0.000051436
Los Angeles	2024	Annual	LDT2	GAS	Aggregated	55	1423190.93	0.1887	0.645537219	0.12182601	0.053843545	0.01016137	0.001049295	0.00019802	0.0080	0.00150976	0.03675	0.006935473
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	55	73357.20	0.0097	0.209383783	0.00203677	0.892149591	0.00867833	0.009255946	0.00009004	0.0120	0.00011673	0.07644	0.000743565
Los Angeles	2024	Annual	LHDT1	GAS	Aggregated	55	105026.62	0.0139	0.600463863	0.00836261	0.143221318	0.00199463	0.000903775	0.00001259	0.0080	0.00011142	0.07644	0.001064574
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	55	29768.24	0.0039	0.205953827	0.00081298	0.865280523	0.00341559	0.011436498	0.00004514	0.0120	0.00004737	0.08918	0.000352027
Los Angeles	2024	Annual	LHDT2	GAS	Aggregated	55	18080.14	0.0024	0.394756453	0.00094643	0.138407831	0.00033183	0.000814315	0.00000195	0.0080	0.00001918	0.08918	0.000213808
Los Angeles	2024	Annual	MCY	GAS	Aggregated	55	190348.39	0.0252	15.57527155	0.39313382	1.01218036	0.02554834	0.001651094	0.00004168	0.0040	0.00010096	0.01176	0.000296833
Los Angeles	2024	Annual	MDV	DSL	Aggregated	55	23002.45	0.0031	0.097899087	0.00029861	0.028726951	0.00008762	0.003160333	0.00000964	0.0080	0.00002440	0.03675	0.000112095
Los Angeles	2024	Annual	MDV	GAS	Aggregated	55	941489.74	0.1248	0.735823255	0.09186386	0.068931924	0.00860581	0.001084117	0.00013535	0.0080	0.00099876	0.03675	0.004588054
Los Angeles	2024	Annual	MH	DSL	Aggregated	55	6460.41	0.0009	0.159079075	0.00013628	2.463754809	0.00211064	0.062272333	0.00005335	0.0160	0.00001371	0.13034	0.000111659
Los Angeles	2024	Annual	MH	GAS	Aggregated	55	18822.07	0.0025	0.904464644	0.00225743	0.225694477	0.00056331	0.0009420	0.00000235	0.0120	0.00002995	0.13034	0.000325312
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	55	67593.21	0.0090	0.03576695	0.00032058	0.607635261	0.00544630	0.009601212	0.00008606	0.0120	0.00010756	0.13034	0.001168252
Los Angeles	2024	Annual	MHDT	GAS	Aggregated	55	14759.51	0.0020	0.918861602	0.00179836	0.277370256	0.00054286	0.000760458	0.00000149	0.0120	0.00002349	0.13034	0.000255097
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	55	58992.86	0.0078	0.097876836	0.00076566	1.382891141	0.01081790	0.024025744	0.00018795	0.0360	0.00028162	0.06174	0.000482972
Los Angeles	2024	Annual	HHDT	GAS	Aggregated	55	52.05	0.0000	26.06803926	0.00017991	3.153195674	0.00002176	0.00088534	0.00000001	0.0200	0.00000014	0.06174	0.000000426
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	55	3186.17	0.0004	0.057781992	0.00002441	0.84786562	0.00035822	0.014949613	0.00000632	0.0120	0.00000507	0.13034	0.000055068
Los Angeles	2024	Annual	OBUS	GAS	Aggregated	55	3958.89	0.0005	1.006391124	0.00052832	0.337156691	0.00017699	0.000703254	0.00000037	0.0120	0.00000630	0.13034	0.000068424
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	55	3527.52	0.0005	0.138394786	0.00006474	4.858151811	0.00227246	0.032189624	0.00001506	0.0120	0.00000561	0.74480	0.000348389
Los Angeles	2024	Annual	SBUS	GAS	Aggregated	55	1584.68	0.0002	0.670436793	0.00014088	0.277723481	0.00005836	0.000604565	0.00000013	0.0080	0.00000168	0.74480	0.000156508
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	55	10.14	0.0000	0.050263037	0.00000007	0.147007717	0.00000020	0.014534097	0.00000002	0.0360	0.00000005	0.06175	0.000000083
Los Angeles	2024	Annual	UBUS	GAS	Aggregated	55	466.05	0.0001	0.192573817	0.00001190	0.153865598	0.00000951	0.000718419	0.00000004	0.0113	0.00000070	0.12357	0.000007637
							7541269	1.0		0.931		0.100		0.0015		0.008		0.039

EMFAC2017 Emission Rates

Region Type: County

Region: Los Angeles (SC)

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Pollutant Classification: TOG GAS

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	TOG_RUNEX (gms/mile)	TOG_RUNEX AVE (gms/mile)
Los Angeles	2024	Annual	LDA	GAS	Aggregated	55	4021900.07	0.5566	0.008006508	0.0045
Los Angeles	2024	Annual	LDT1	GAS	Aggregated	55	486400.77	0.0673	0.023065781	0.0016
Los Angeles	2024	Annual	LDT2	GAS	Aggregated	55	1423190.93	0.1970	0.014417917	0.0028
Los Angeles	2024	Annual	LHDT1	GAS	Aggregated	55	105026.62	0.0145	0.030323364	0.0004
Los Angeles	2024	Annual	LHDT2	GAS	Aggregated	55	18080.14	0.0025	0.01900611	0.0000
Los Angeles	2024	Annual	MCY	GAS	Aggregated	55	190348.39	0.0263	2.096613555	0.0552
Los Angeles	2024	Annual	MDV	GAS	Aggregated	55	941489.74	0.1303	0.018864308	0.0025
Los Angeles	2024	Annual	MH	GAS	Aggregated	55	18822.07	0.0026	0.041539329	0.0001
Los Angeles	2024	Annual	MHDT	GAS	Aggregated	55	14759.51	0.0020	0.045880287	0.0001
Los Angeles	2024	Annual	HHDT	GAS	Aggregated	55	52.05	0.0000	0.452622093	0.0000
Los Angeles	2024	Annual	OBUS	GAS	Aggregated	55	3958.89	0.0005	0.05141170	0.0000
Los Angeles	2024	Annual	SBUS	GAS	Aggregated	55	1584.68	0.0002	0.034362725	0.0000
Los Angeles	2024	Annual	UBUS	GAS	Aggregated	55	466.05	0.0001	0.010594452	0.0000
							7226080	1.0		0.067

EMFAC2017 Worksheet
(55 mph)

PM2_5_RUNEX (gms/mile)	PM2_5_RUNEX_AVE (gms/mile)	PM2_5_PMTW (gms/mile)	PM2_5_PMTW_AVE (gms/mile)	PM2_5_PMBW (gms/mile)	PM2_5_PMBW_AVE (gms/mile)
0.004776577	0.000024386	0.0020	0.000010211	0.01575	0.000080410
0.000901516	0.000480795	0.0020	0.001066638	0.01575	0.008399770
0.091787879	0.000002858	0.0020	0.000000062	0.01575	0.000000490
0.001281911	0.000082681	0.0020	0.000128997	0.01575	0.001015852
0.003586984	0.000005020	0.0020	0.000002799	0.01575	0.000022044
0.000964795	0.000182076	0.0020	0.000377441	0.01575	0.002972346
0.008855537	0.000086142	0.0030	0.000029182	0.03276	0.000318671
0.000830988	0.000011573	0.0020	0.000027854	0.03276	0.000456246
0.01094176	0.000043191	0.0030	0.000011842	0.03822	0.000150869
0.000748732	0.000001795	0.0020	0.000004795	0.03822	0.000091632
0.001541738	0.000038915	0.0010	0.000025241	0.00504	0.000127214
0.003023619	0.000009223	0.0020	0.000006100	0.01575	0.000048041
0.000996861	0.000124453	0.0020	0.000249690	0.01575	0.001966309
0.05957846	0.000051039	0.0040	0.000003427	0.05586	0.000047854
0.000866146	0.000002162	0.0030	0.000007488	0.05586	0.000139420
0.009185867	0.000082334	0.0030	0.000026889	0.05586	0.000500679
0.000699213	0.000001368	0.0030	0.000005871	0.05586	0.000109327
0.022986401	0.000179815	0.0090	0.000070404	0.02646	0.000206988
0.000814038	0.000000006	0.0050	0.000000035	0.02646	0.000000183
0.014302899	0.000006043	0.0030	0.000001267	0.05586	0.000023601
0.000646616	0.000000339	0.0030	0.000001575	0.05586	0.000029324
0.030797115	0.000014406	0.0030	0.000001403	0.31920	0.000149310
0.000555875	0.000000117	0.0020	0.000000420	0.31920	0.000067075
0.013905359	0.000000019	0.0090	0.000000012	0.02646	0.000000036
0.00066056	0.000000041	0.0028	0.000000175	0.05296	0.000003273
0.0014			0.002		0.017

EMFAC2017 Worksheet
(55 mph)

EMFAC2017 Emission Rates
Region Type: County
Region: Los Angeles (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Pollutant Classification: TOG DSL

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	TOG_RUNEX (gms/mile)	TOG_RUNEX AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	55	38501.07	0.1222	0.00880537	0.0011
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	55	234.77	0.0007	0.143904926	0.0001
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	55	10554.81	0.0335	0.008952914	0.0003
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	55	73357.20	0.2327	0.042455491	0.0099
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	55	29768.24	0.0944	0.042039165	0.0040
Los Angeles	2024	Annual	MDV	DSL	Aggregated	55	23002.45	0.0730	0.006168921	0.0005
Los Angeles	2024	Annual	MH	DSL	Aggregated	55	6460.41	0.0205	0.040249641	0.0008
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	55	67593.21	0.2145	0.006750312	0.0014
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	55	58992.86	0.1872	0.016252359	0.0030
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	55	3186.17	0.0101	0.00979572	0.0001
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	55	3527.52	0.0112	0.047090948	0.0005
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	55	10.14	0.0000	0.039675716	0.0000
							315189	1.0	0.022	

EMFAC2017 Emission Rates
Region Type: County
Region: Los Angeles (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Pollutant Classification: DSL Particulate

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	PM10_RUNEX (gms/mile)	PM10_RUNEX AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	55	38501.07	0.1222	0.004992553	0.0006
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	55	234.77	0.0007	0.09593812	0.0001
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	55	10554.81	0.0335	0.003749171	0.0001
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	55	73357.20	0.2327	0.009255946	0.0022
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	55	29768.24	0.0944	0.01143650	0.0011
Los Angeles	2024	Annual	MDV	DSL	Aggregated	55	23002.45	0.0730	0.003160333	0.0002
Los Angeles	2024	Annual	MH	DSL	Aggregated	55	6460.41	0.0205	0.062272333	0.0013
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	55	67593.21	0.2145	0.009601212	0.0021
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	55	58992.86	0.1872	0.024025744	0.0045
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	55	3186.17	0.0101	0.014949613	0.0002
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	55	3527.52	0.0112	0.032189624	0.0004
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	55	10.14	0.0000	0.014534097	0.0000
							315189	1.0	0.013	

EMFAC2017 Worksheet
(60 mph)

EMFAC2017 Emission Rates
Region Type: County
Region: Los Angeles (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Pollutant Classification: Criteria

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	CO_RUNEX (gms/mile)	CO_RUNEX_AVE (gms/mile)	NOX_RUNEX (gms/mile)	NOx_RUNEX_AVE (gms/mile)	PM10_RUNEX (gms/mile)	PM10_RUNEX_AVE (gms/mile)	PM10_PMTW (gms/mile)	PM10_PMTW_AVE (gms/mile)	PM10_PMBW (gms/mile)	PM10_PMBW_AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	60	38501.07	0.0051	0.11285329	0.00057616	0.049489496	0.00025266	0.005236153	0.00002673	0.0080	0.00004084	0.03675	0.000187623
Los Angeles	2024	Annual	LDA	GAS	Aggregated	60	4021900.07	0.5333	0.437642213	0.23340280	0.02653403	0.01415110	0.001052026	0.00056107	0.0080	0.00426655	0.03675	0.019599464
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	60	234.77	0.0000	1.121696481	0.00003492	1.078200198	0.00003357	0.105006602	0.00000327	0.0080	0.00000025	0.03675	0.000001144
Los Angeles	2024	Annual	LDT1	GAS	Aggregated	60	486400.77	0.0645	0.824885981	0.05320394	0.079364774	0.00511891	0.001484663	0.00009576	0.0080	0.00051599	0.03675	0.002370321
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	60	10554.81	0.0014	0.067949384	0.00009510	0.027894649	0.00003904	0.003741245	0.00000524	0.0080	0.00001120	0.03675	0.000051436
Los Angeles	2024	Annual	LDT2	GAS	Aggregated	60	1423190.93	0.1887	0.607552	0.11465743	0.055801114	0.01053081	0.001124385	0.00021219	0.0080	0.00150976	0.03675	0.006935473
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	60	73357.20	0.0097	0.233752505	0.00227381	0.923211592	0.00898048	0.009546276	0.00009286	0.0120	0.00011673	0.07644	0.000743565
Los Angeles	2024	Annual	LHDT1	GAS	Aggregated	60	105026.62	0.0139	0.652371252	0.00908552	0.146760917	0.00204393	0.000973094	0.00001355	0.0080	0.00011142	0.07644	0.001064574
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	60	29768.24	0.0039	0.229251973	0.00090494	0.895172173	0.00353358	0.011699304	0.00004618	0.0120	0.00004737	0.08918	0.000352027
Los Angeles	2024	Annual	LHDT2	GAS	Aggregated	60	18080.14	0.0024	0.401908926	0.00096357	0.141395445	0.00033899	0.000875624	0.00000210	0.0080	0.00001918	0.08918	0.000213808
Los Angeles	2024	Annual	MCY	GAS	Aggregated	60	190348.39	0.0252	17.14065473	0.43264550	1.03955224	0.02623923	0.001788021	0.00004513	0.0040	0.00010096	0.01176	0.000296833
Los Angeles	2024	Annual	MDV	DSL	Aggregated	60	23002.45	0.0031	0.095213165	0.00029042	0.028920	0.00008821	0.003210	0.00000979	0.0080	0.00002440	0.03675	0.000112095
Los Angeles	2024	Annual	MDV	GAS	Aggregated	60	941489.74	0.1248	0.698749039	0.08723533	0.071451445	0.00892036	0.001161944	0.00014506	0.0080	0.00099876	0.03675	0.004588054
Los Angeles	2024	Annual	MH	DSL	Aggregated	60	6460.41	0.0009	0.160413573	0.00013742	2.450065551	0.00209891	0.07073879	0.00006060	0.0160	0.00001371	0.13034	0.000111659
Los Angeles	2024	Annual	MH	GAS	Aggregated	60	18822.07	0.0025	0.976836934	0.00243806	0.231001523	0.00057655	0.001014176	0.00000253	0.0120	0.00002995	0.13034	0.000325312
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	60	67593.21	0.0090	0.039801873	0.00035675	0.730711153	0.00654944	0.011966197	0.00010725	0.0120	0.00010756	0.13034	0.001168252
Los Angeles	2024	Annual	MHDT	GAS	Aggregated	60	14759.51	0.0020	0.883624734	0.00172940	0.283022024	0.00055392	0.000817363	0.00000160	0.0120	0.00002349	0.13034	0.000255097
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	60	58992.86	0.0078	0.108919096	0.00085204	1.649232826	0.01290140	0.029955237	0.00023433	0.0360	0.00028162	0.06174	0.000482972
Los Angeles	2024	Annual	HHDT	GAS	Aggregated	60	52.05	0.0000	25.2803922	0.00017447	3.227605587	0.00002228	0.000954855	0.00000001	0.0200	0.00000014	0.06174	0.000000426
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	60	3186.17	0.0004	0.064588586	0.00002729	1.040690947	0.00043969	0.018749431	0.00000792	0.0120	0.00000507	0.13034	0.000055068
Los Angeles	2024	Annual	OBUS	GAS	Aggregated	60	3958.89	0.0005	0.975745715	0.00051223	0.344283394	0.00018074	0.000756058	0.00000040	0.0120	0.00000630	0.13034	0.000068424
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	60	3527.52	0.0005	0.140611892	0.00006577	4.965003911	0.00232244	0.035845793	0.00001677	0.0120	0.00000561	0.74480	0.000348389
Los Angeles	2024	Annual	SBUS	GAS	Aggregated	60	1584.68	0.0002	0.627280084	0.00013181	0.283193808	0.00005951	0.000649497	0.00000014	0.0080	0.00000168	0.74480	0.000156508
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	60	10.14	0.0000	0.046370978	0.00000006	0.188585055	0.00000025	0.017650522	0.00000002	0.0360	0.00000005	0.06175	0.000000083
Los Angeles	2024	Annual	UBUS	GAS	Aggregated	60	466.05	0.0001	0.180177641	0.00001113	0.156896293	0.00000970	0.000771813	0.00000005	0.0113	0.00000070	0.12357	0.000007637
							7541269	1.0		0.942		0.106		0.0017		0.008		0.039

EMFAC2017 Emission Rates
Region Type: County
Region: Los Angeles (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Pollutant Classification: TOG GAS

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	TOG_RUNEX (gms/mile)	TOG_RUNEX_AVE (gms/mile)
Los Angeles	2024	Annual	LDA	GAS	Aggregated	60	4021900.07	0.5566	0.008554507	0.0048
Los Angeles	2024	Annual	LDT1	GAS	Aggregated	60	486400.77	0.0673	0.024284397	0.0016
Los Angeles	2024	Annual	LDT2	GAS	Aggregated	60	1423190.93	0.1970	0.015306212	0.0030
Los Angeles	2024	Annual	LHDT1	GAS	Aggregated	60	105026.62	0.0145	0.032980105	0.0005
Los Angeles	2024	Annual	LHDT2	GAS	Aggregated	60	18080.14	0.0025	0.020554492	0.0001
Los Angeles	2024	Annual	MCY	GAS	Aggregated	60	190348.39	0.0263	2.27241777	0.0599
Los Angeles	2024	Annual	MDV	GAS	Aggregated	60	941489.74	0.1303	0.020088033	0.0026
Los Angeles	2024	Annual	MH	GAS	Aggregated	60	18822.07	0.0026	0.045032612	0.0001
Los Angeles	2024	Annual	MHDT	GAS	Aggregated	60	14759.51	0.0020	0.049390352	0.0001
Los Angeles	2024	Annual	HHDT	GAS	Aggregated	60	52.05	0.0000	0.488411984	0.0000
Los Angeles	2024	Annual	OBUS	GAS	Aggregated	60	3958.89	0.0005	0.055372211	0.0000
Los Angeles	2024	Annual	SBUS	GAS	Aggregated	60	1584.68	0.0002	0.03691661	0.0000
Los Angeles	2024	Annual	UBUS	GAS	Aggregated	60	466.05	0.0001	0.011381846	0.0000
							7226080	1.0		0.073

EMFAC2017 Worksheet
(60 mph)

PM2_5_RUNEX (gms/mile)	PM2_5_RUNEX_AVE (gms/mile)	PM2_5_PMTW (gms/mile)	PM2_5_PMTW_AVE (gms/mile)	PM2_5_PMBW (gms/mile)	PM2_5_PMBW_AVE (gms/mile)
0.005009639	0.000025576	0.0020	0.000010211	0.01575	0.000080410
0.0009673	0.000515879	0.0020	0.001066638	0.01575	0.008399770
0.100464063	0.000003128	0.0020	0.000000062	0.01575	0.000000490
0.001365119	0.000088048	0.0020	0.000128997	0.01575	0.001015852
0.0035794	0.000005010	0.0020	0.000002799	0.01575	0.000022044
0.001033838	0.000195106	0.0020	0.000377441	0.01575	0.002972346
0.009133309	0.000088844	0.0030	0.000029182	0.03276	0.000318671
0.000894724	0.000012461	0.0020	0.000027854	0.03276	0.000456246
0.011193197	0.000044184	0.0030	0.000011842	0.03822	0.000150869
0.000805104	0.000001930	0.0020	0.000004795	0.03822	0.000091632
0.001669636	0.000042143	0.0010	0.000025241	0.00504	0.000127214
0.003071039	0.000009367	0.0020	0.000006100	0.01575	0.000048041
0.001068426	0.000133388	0.0020	0.000249690	0.01575	0.001966309
0.067678661	0.000057979	0.0040	0.000003427	0.05586	0.000047854
0.000932498	0.000002327	0.0030	0.000007488	0.05586	0.000139420
0.011448545	0.000102615	0.0030	0.000026889	0.05586	0.000500679
0.000751535	0.000001471	0.0030	0.000005871	0.05586	0.000109327
0.028659386	0.000224193	0.0090	0.000070404	0.02646	0.000206988
0.000877954	0.000000006	0.0050	0.000000035	0.02646	0.000000183
0.017938338	0.000007579	0.0030	0.000001267	0.05586	0.000023601
0.000695167	0.000000365	0.0030	0.000001575	0.05586	0.000029324
0.03429512	0.000016042	0.0030	0.000001403	0.31920	0.000149310
0.000597189	0.000000125	0.0020	0.000000420	0.31920	0.000067075
0.016886968	0.000000023	0.0090	0.000000012	0.02646	0.000000036
0.000709654	0.000000044	0.0028	0.000000175	0.05296	0.000003273
0.0016		0.002		0.017	

EMFAC2017 Worksheet
(60 mph)

EMFAC2017 Emission Rates
Region Type: County
Region: Los Angeles (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Pollutant Classification: TOG DSL

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	TOG_RUNEX (gms/mile)	TOG_RUNEX AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	60	38501.07	0.1222	0.008996079	0.0011
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	60	234.77	0.0007	0.15725884	0.0001
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	60	10554.81	0.0335	0.008608051	0.0003
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	60	73357.20	0.2327	0.043571542	0.0101
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	60	29768.24	0.0944	0.043088697	0.0041
Los Angeles	2024	Annual	MDV	DSL	Aggregated	60	23002.45	0.0730	0.006064379	0.0004
Los Angeles	2024	Annual	MH	DSL	Aggregated	60	6460.41	0.0205	0.041477005	0.0009
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	60	67593.21	0.2145	0.007835664	0.0017
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	60	58992.86	0.1872	0.018899169	0.0035
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	60	3186.17	0.0101	0.011480	0.0001
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	60	3527.52	0.0112	0.050241998	0.0006
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	60	10.14	0.0000	0.037376899	0.0000
							315189	1.0	0.023	

EMFAC2017 Emission Rates
Region Type: County
Region: Los Angeles (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Pollutant Classification: DSL Particulate

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	Wt Frac	PM10_RUNEX (gms/mile)	PM10_RUNEX AVE (gms/mile)
Los Angeles	2024	Annual	LDA	DSL	Aggregated	60	38501.07	0.1222	0.005236153	0.0006
Los Angeles	2024	Annual	LDT1	DSL	Aggregated	60	234.77	0.0007	0.105006602	0.0001
Los Angeles	2024	Annual	LDT2	DSL	Aggregated	60	10554.81	0.0335	0.003741245	0.0001
Los Angeles	2024	Annual	LHDT1	DSL	Aggregated	60	73357.20	0.2327	0.009546276	0.0022
Los Angeles	2024	Annual	LHDT2	DSL	Aggregated	60	29768.24	0.0944	0.011699304	0.0011
Los Angeles	2024	Annual	MDV	DSL	Aggregated	60	23002.45	0.0730	0.003210	0.0002
Los Angeles	2024	Annual	MH	DSL	Aggregated	60	6460.41	0.0205	0.07073879	0.0014
Los Angeles	2024	Annual	MHDT	DSL	Aggregated	60	67593.21	0.2145	0.011966197	0.0026
Los Angeles	2024	Annual	HHDT	DSL	Aggregated	60	58992.86	0.1872	0.029955237	0.0056
Los Angeles	2024	Annual	OBUS	DSL	Aggregated	60	3186.17	0.0101	0.018749431	0.0002
Los Angeles	2024	Annual	SBUS	DSL	Aggregated	60	3527.52	0.0112	0.035845793	0.0004
Los Angeles	2024	Annual	UBUS	DSL	Aggregated	60	10.14	0.0000	0.017650522	0.0000
							315189	1.0	0.015	

Emission Factor Rate Adjustment Worksheet

CO Emissions

Acceleration / On-Ramp (15 - 45 mph)

$Emfac (gr/mi) = (emfac \text{ at average link speed} \times 16/60) \times (0.027) \times (exp (.098 \times \text{acceleration speed product})) \times (60 \text{ min/hr}) / (\text{average link speed})$

emfac at link speed	0.982
speed (mph)	45.0
acceleration time (sec)	18.0
acceleration rate (mph/sec)	2.50

Emfac (gr/mi)	2.336
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Deceleration / Off-Ramp

$Emfac (gr/mi) = (emfac \text{ at idle speed} \times 1.5)$

emfac at idle speed (gr/mi)	2.398
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Emfac (gr/mi)	3.597
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NOX Emissions

Acceleration / On-Ramp (15 - 45 mph)

$Emfac (gr/mi) = (emfac \text{ at average link speed} \times 16/60) \times (0.027) \times (exp (.098 \times \text{acceleration speed product})) \times (60 \text{ min/hr}) / (\text{average link speed})$

emfac at link speed	0.100
speed (mph)	45.0
acceleration time (sec)	18.0
acceleration rate (mph/sec)	2.50

Emfac (gr/mi)	0.238
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Deceleration / Off-Ramp

$Emfac (gr/mi) = (emfac \text{ at idle speed} \times 1.5)$

emfac at idle speed (gr/mi)	0.313
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Emfac (gr/mi)	0.470
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Emission Factor Rate Adjustment Worksheet

PM10 Emissions

Acceleration / On-Ramp (15 - 45 mph)

Emfac (gr/mi) = (emfac at average link speed x 16/60) x (0.027) x (exp (.098 x acceleration speed product)) x (60 min/hr) / (average link speed)

emfac at link speed	0.0014
speed (mph)	45.0
acceleration time (sec)	18.0
acceleration rate (mph/sec)	2.50

Emfac (gr/mi)	0.0033
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Deceleration / Off-Ramp

*Emfac (gr/mi) = (emfac at idle speed * 1.5)*

emfac at idle speed (gr/mi)	0.0101
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Emfac (gr/mi)	0.015
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PM2.5 Emissions

Acceleration / On-Ramp (15 - 45 mph)

Emfac (gr/mi) = (emfac at average link speed x 16/60) x (0.027) x (exp (.098 x acceleration speed product)) x (60 min/hr) / (average link speed)

emfac at link speed	0.0013
speed (mph)	45.0
acceleration time (sec)	18.0
acceleration rate (mph/sec)	2.50

Emfac (gr/mi)	0.0031
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Deceleration / Off-Ramp

*Emfac (gr/mi) = (emfac at idle speed * 1.5)*

emfac at idle speed (gr/mi)	0.0094
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Emfac (gr/mi)	0.014
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Emission Factor Rate Adjustment Worksheet

TOG GAS Emissions

Acceleration / On-Ramp (15 - 45 mph)

$Emfac (gr/mi) = (emfac \text{ at average link speed} \times 16/60) \times (0.027) \times (exp (.098 \times \text{acceleration speed product})) \times (60 \text{ min/hr}) / (\text{average link speed})$

emfac at link speed	0.067
speed (mph)	45.0
acceleration time (sec)	18.0
acceleration rate (mph/sec)	2.50

Emfac (gr/mi)	0.159
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Deceleration / Off-Ramp

$Emfac (gr/mi) = (emfac \text{ at idle speed} \times 1.5)$

emfac at idle speed (gr/mi)	0.509
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Emfac (gr/mi)	0.764
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TOG DSL Emissions

Acceleration / On-Ramp (15 - 45 mph)

$Emfac (gr/mi) = (emfac \text{ at average link speed} \times 16/60) \times (0.027) \times (exp (.098 \times \text{acceleration speed product})) \times (60 \text{ min/hr}) / (\text{average link speed})$

emfac at link speed	0.023
speed (mph)	45.0
acceleration time (sec)	18.0
acceleration rate (mph/sec)	2.50

Emfac (gr/mi)	0.055
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Deceleration / Off-Ramp

$Emfac (gr/mi) = (emfac \text{ at idle speed} \times 1.5)$

emfac at idle speed (gr/mi)	0.386
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Emfac (gr/mi)	0.579
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Emission Factor Rate Adjustment Worksheet

DSL Particulate Emissions

Acceleration / On-Ramp (15 - 45 mph)

Emfac (gr/mi) = (emfac at average link speed x 16/60) x (0.027) x (exp (.098 x acceleration speed product)) x (60 min/hr) / (average link speed)

emfac at link speed	0.010
speed (mph)	45.0
acceleration time (sec)	18.0
acceleration rate (mph/sec)	2.50

Emfac (gr/mi)	0.024
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Deceleration / Off-Ramp

*Emfac (gr/mi) = (emfac at idle speed * 1.5)*

emfac at idle speed (gr/mi)	0.025
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Emfac (gr/mi)	0.038
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Source: California Department of Transportation, 1989. Division of New Technology and Research. Caline4 – A Dispersion Model for Predicting Air Pollution Concentrations Near Roadways (Revised). FHWA/CA/TL-84/15.

Emission Factor Profile Worksheet

Chronic Exposure

TOG -Toxic Emissions

Gasoline/Toxic Fractions/Hot Stabilized Exhaust

Year	Benzene	Formaldehyde	1,3-Butadiene	Acetaldehyde	Acrolein
2004	0.028414	0.021422	0.006603	0.005511	0.001533
2005	0.028205	0.021200	0.006551	0.005450	0.001520
2006	0.027938	0.021000	0.006483	0.005350	0.001510
2007	0.027660	0.020700	0.006410	0.005250	0.001490
2008	0.027338	0.020300	0.006326	0.005120	0.001470
2009	0.026849	0.019800	0.006190	0.004870	0.001450
2010	0.026521	0.019400	0.006105	0.004750	0.001430
2011	0.026521	0.019400	0.006105	0.004750	0.001430
2012	0.025656	0.018500	0.005873	0.004370	0.001380
2013	0.025656	0.018500	0.005873	0.004370	0.001380
2014	0.025656	0.018500	0.005873	0.004370	0.001380
2015	0.024349	0.017100	0.005530	0.003850	0.001310
2016	0.024349	0.017100	0.005530	0.003850	0.001310
2017	0.024349	0.017100	0.005530	0.003850	0.001310
2018	0.022182	0.014700	0.004944	0.002860	0.001130
2019	0.022182	0.014700	0.004944	0.002860	0.001130
2020	0.021079	0.013600	0.004659	0.002450	0.001130
2021	0.021079	0.013600	0.004659	0.002450	0.001130
2022	0.021079	0.013600	0.004659	0.002450	0.001130
2023	0.021079	0.013600	0.004659	0.002450	0.001130
2024	0.021079	0.013600	0.004659	0.002450	0.001130
2025	0.021079	0.013600	0.004659	0.002450	0.001130
2026	0.021079	0.013600	0.004659	0.002450	0.001130
2027	0.021079	0.013600	0.004659	0.002450	0.001130
2028	0.021079	0.013600	0.004659	0.002450	0.001130
2029	0.021079	0.013600	0.004659	0.002450	0.001130
2030	0.021079	0.013600	0.004659	0.002450	0.001130

Analysis Year					
2024	0.021079	0.013600	0.004659	0.002450	0.001130

TOG Emission Rate - gr/mi
Speed (MPH)

Acceleration	0.159
Deceleration	0.764
55	0.067
60	0.073

Toxic Emission Rate - gr/mi
Speed (MPH)

Acceleration	0.006824
Deceleration	0.032790
55	0.002876
60	0.003133

Weight Fraction / Speciation

Benzene	0.491
Formaldehyde	0.317
1,3-Butadiene	0.109
Acetaldehyde	0.057
Acrolein	0.026

Emission Factor Profile Worksheet

Chronic Exposure

Diesel Particulate Emissions - PM10

PM10 Emission Rate - gr/mi	Acceleration	0.024
Speed (MPH)	Deceleration	0.038
	55	0.013
	60	0.015

Source: TOG/toxic fractions from UC Davis-Caltrans Air Quality Project, *Estimating Mobile Source Air Toxic Emissions: A Step-by-Step Project Analysis Methodology*. Task Order No. 61.

Emission Factor Profile Worksheet

Acute/8-Hour Exposure

TOG -Toxic Emissions

Gasoline/Toxic Fractions/Hot Stabilized Exhaust

Year	Benzene	Formaldehyde	1,3-Butadiene	Acetaldehyde	Acrolein
2004	0.028414	0.021422	0.006603	0.005511	0.001533
2005	0.028205	0.021200	0.006551	0.005450	0.001520
2006	0.027938	0.021000	0.006483	0.005350	0.001510
2007	0.027660	0.020700	0.006410	0.005250	0.001490
2008	0.027338	0.020300	0.006326	0.005120	0.001470
2009	0.026849	0.019800	0.006190	0.004870	0.001450
2010	0.026521	0.019400	0.006105	0.004750	0.001430
2011	0.026521	0.019400	0.006105	0.004750	0.001430
2012	0.025656	0.018500	0.005873	0.004370	0.001380
2013	0.025656	0.018500	0.005873	0.004370	0.001380
2014	0.025656	0.018500	0.005873	0.004370	0.001380
2015	0.024349	0.017100	0.005530	0.003850	0.001310
2016	0.024349	0.017100	0.005530	0.003850	0.001310
2017	0.024349	0.017100	0.005530	0.003850	0.001310
2018	0.022182	0.014700	0.004944	0.002860	0.001130
2019	0.022182	0.014700	0.004944	0.002860	0.001130
2020	0.021079	0.013600	0.004659	0.002450	0.001130
2021	0.021079	0.013600	0.004659	0.002450	0.001130
2022	0.021079	0.013600	0.004659	0.002450	0.001130
2023	0.021079	0.013600	0.004659	0.002450	0.001130
2024	0.021079	0.013600	0.004659	0.002450	0.001130
2025	0.021079	0.013600	0.004659	0.002450	0.001130
2026	0.021079	0.013600	0.004659	0.002450	0.001130
2027	0.021079	0.013600	0.004659	0.002450	0.001130
2028	0.021079	0.013600	0.004659	0.002450	0.001130
2029	0.021079	0.013600	0.004659	0.002450	0.001130
2030	0.021079	0.013600	0.004659	0.002450	0.001130

Analysis Year					
2024	0.021079	0.013600	0.004659	0.002450	0.001130

TOG Emission Rate - gr/mi
Speed (MPH)

Acceleration	0.159
Deceleration	0.764
5	0.509
55	0.067
60	0.073

Toxic Emission Rate - gr/mi
Speed (MPH)

Acceleration	0.006824
Deceleration	0.032790
5	0.021845
55	0.002876
60	0.003133

Weight Fraction / Speciation

Benzene	0.491
Formaldehyde	0.317
1,3-Butadiene	0.109
Acetaldehyde	0.057
Acrolein	0.026

Emission Factor Profile Worksheet

Acute/8-Hour Exposure

TOG -Toxic Emissions

Diesel/Toxic Fractions/Hot Stabilized Exhaust

Year	Benzene	Formaldehyde	1,3-Butadiene	Acetaldehyde	Acrolein
2004	0.020009	0.147133	0.001900	0.073526	0
2005	0.020009	0.147133	0.001900	0.073526	0
2006	0.020009	0.147133	0.001900	0.073526	0
2007	0.020009	0.147133	0.001900	0.073526	0
2008	0.020009	0.147133	0.001900	0.073526	0
2009	0.020009	0.147133	0.001900	0.073526	0
2010	0.020009	0.147133	0.001900	0.073526	0
2011	0.020009	0.147133	0.001900	0.073526	0
2012	0.020009	0.147133	0.001900	0.073526	0
2013	0.020009	0.147133	0.001900	0.073526	0
2014	0.020009	0.147133	0.001900	0.073526	0
2015	0.020009	0.147133	0.001900	0.073526	0
2016	0.020009	0.147133	0.001900	0.073526	0
2017	0.020009	0.147133	0.001900	0.073526	0
2018	0.020009	0.147133	0.001900	0.073526	0
2019	0.020009	0.147133	0.001900	0.073526	0
2020	0.020009	0.147133	0.001900	0.073526	0
2021	0.020009	0.147133	0.001900	0.073526	0
2022	0.020009	0.147133	0.001900	0.073526	0
2023	0.020009	0.147133	0.001900	0.073526	0
2024	0.020009	0.147133	0.001900	0.073526	0
2025	0.020009	0.147133	0.001900	0.073526	0
2026	0.020009	0.147133	0.001900	0.073526	0
2027	0.020009	0.147133	0.001900	0.073526	0
2028	0.020009	0.147133	0.001900	0.073526	0
2029	0.020009	0.147133	0.001900	0.073526	0
2030	0.020009	0.147133	0.001900	0.073526	0

Analysis Year

2024	0.020009	0.147133	0.001900	0.073526	0
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TOG Emission Rate - gr/mi
Speed (MPH)

Acceleration	0.055
Deceleration	0.579
5	0.386
55	0.022
60	0.023

Toxic Emission Rate - gr/mi
Speed (MPH)

Acceleration	0.013341
Deceleration	0.140447
5	0.093631
55	0.005336
60	0.005579

Weight Fraction / Speciation

Benzene	0.082
Formaldehyde	0.607
1,3-Butadiene	0.008
Acetaldehyde	0.303
Acrolein	0.000

On-Road Mobile Sources Emission Rate Computation

Average Speed Scenario

NB/Route 101 (Sources N_M_1 to N_M_13)

CO Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	4904
Pollutant Mass Emission Rate (gr/mi)	0.942

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.36679
Pollutant Emission Rate (gr/sec/source)	2.82E-02

SB/Route 101 (Sources S_M_1 to S_M_13)

CO Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	3670
Pollutant Mass Emission Rate (gr/mi)	0.931

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.27129
Pollutant Emission Rate (gr/sec/source)	2.09E-02

SB OFF/WESTERN (Sources S_OFF_W_1 to S_OFF_W_10)

CO Emissions

Number of Sources	10
Link Length (meters)	122
Volume/Baseline (VPH)	408
Pollutant Mass Emission Rate (gr/mi)	3.597

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.03090
Pollutant Emission Rate (gr/sec/source)	3.09E-03

NB ON/WESTERN (Sources N_ON_W_1 to N_ON_W_28)

CO Emissions

Number of Sources	28
Link Length (meters)	222
Volume/Baseline (VPH)	518
Pollutant Mass Emission Rate (gr/mi)	2.336

On-Road Mobile Sources
Emission Rate Computation

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.04637
Pollutant Emission Rate (gr/sec/source)	1.66E-03

Minimum Speed Scenario

NB/Route 101 (Sources N_M_1 to N_M_13)

CO Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	1416
Pollutant Mass Emission Rate (gr/mi)	2.398

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.26961
Pollutant Emission Rate (gr/sec/source)	2.07E-02

SB/Route 101 (Sources S_M_1 to S_M_13)

CO Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	2928
Pollutant Mass Emission Rate (gr/mi)	2.398

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.55749
Pollutant Emission Rate (gr/sec/source)	4.29E-02

SB OFF/WESTERN (Sources S_OFF_W_1 to S_OFF_W_10)

CO Emissions

Number of Sources	10
Link Length (meters)	122
Volume/Baseline (VPH)	408
Pollutant Mass Emission Rate (gr/mi)	3.597

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.03090
Pollutant Emission Rate (gr/sec/source)	3.09E-03

On-Road Mobile Sources
Emission Rate Computation

NB ON/WESTERN (Sources N_ON_W_1 to N_ON_W_28)

CO Emissions

Number of Sources	28
Link Length (meters)	222
Volume/Baseline (VPH)	518
Pollutant Mass Emission Rate (gr/mi)	2.336

Emission Rate (gr/sec) = ((Mass Emission Rate x Volume/Baseline)/(1609.3 m/mile) x (3600 sec/hr)) x (Link Length)

Pollutant Emission Rate (gr/sec)	0.04637
Pollutant Emission Rate (gr/sec/source)	1.66E-03

On-Road Mobile Sources
Emission Rate Computation

Minimum Speed Scenario

NB/Route 101 (Sources N_M_1 to N_M_13)

NOx Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	1416
Pollutant Mass Emission Rate (gr/mi)	0.313

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.03519
Pollutant Emission Rate (gr/sec/source)	2.71E-03

SB/Route 101 (Sources S_M_1 to S_M_13)

NOx Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	2928
Pollutant Mass Emission Rate (gr/mi)	0.313

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.07277
Pollutant Emission Rate (gr/sec/source)	5.60E-03

SB OFF/WESTERN (Sources S_OFF_W_1 to S_OFF_W_10)

NOx Emissions

Number of Sources	10
Link Length (meters)	122
Volume/Baseline (VPH)	408
Pollutant Mass Emission Rate (gr/mi)	0.470

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00404
Pollutant Emission Rate (gr/sec/source)	4.04E-04

NB ON/WESTERN (Sources N_ON_W_1 to N_ON_W_28)

NOx Emissions

Number of Sources	28
Link Length (meters)	222
Volume/Baseline (VPH)	518
Pollutant Mass Emission Rate (gr/mi)	0.238

On-Road Mobile Sources
Emission Rate Computation

Emission Rate (gr/sec) = ((Mass Emission Rate x Volume/Baseline)/(1609.3 m/mile) x (3600 sec/hr)) x (Link Length)

Pollutant Emission Rate (gr/sec)	0.00472
Pollutant Emission Rate (gr/sec/source)	1.69E-04

On-Road Mobile Sources Emission Rate Computation

Average Speed Scenario

NB/Route 101 (Sources N_M_1 to N_M_13)

PM10 Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	4904
Particle Size Multiplier (g/mi)	1.0
Road Surface Silt Loading (g/m2)	0.02
Average Vehicle Weight (tons)	2.4
Emfac2017 Emissions Run (g/mi)	0.0017
Emfac2017 Emissions TW/BW (g/mi)	0.047
PM10 Reentrainment Mass Emission Rate (gr/mi)	0.118

For PM10 Reentrainment: Mass Emission Rate (gr/mile) = ((Particulate PM10 Base Emission Factor) x
 (Road Surface Silt Loading)^{0.91} x (Gross Vehicle Weight)^{1.02}) + (Emfac2014 Emissions)
 Emission Rate (gr/sec) = ((Mass Emission Rate x Volume/Baseline)/(1609.3 m/mile) x (3600 sec/hr)) x (Link Length)

PM10 Reentrainment Emission Rate (gr/sec)	0.046010
PM10 Reentrainment Emission Rate (gr/sec/source)	3.54E-03

SB/Route 101 (Sources S_M_1 to S_M_13)

PM10 Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	3670
Particle Size Multiplier (g/mi)	1.0
Road Surface Silt Loading (g/m2)	0.02
Average Vehicle Weight (tons)	2.4
Emfac2017 Emissions Run (g/mi)	0.0015
Emfac2017 Emissions TW/BW (g/mi)	0.047
PM10 Reentrainment Mass Emission Rate (gr/mi)	0.118

For PM10 Reentrainment: Mass Emission Rate (gr/mile) = ((Particulate PM10 Base Emission Factor) x
 (Road Surface Silt Loading)^{0.91} x (Gross Vehicle Weight)^{1.02}) + (Emfac2014 Emissions)
 Emission Rate (gr/sec) = ((Mass Emission Rate x Volume/Baseline)/(1609.3 m/mile) x (3600 sec/hr)) x (Link Length)

PM10 Reentrainment Emission Rate (gr/sec)	0.034374
PM10 Reentrainment Emission Rate (gr/sec/source)	2.64E-03

SB OFF/WESTERN (Sources S_OFF_W_1 to S_OFF_W_10)

PM10 Emissions

Number of Sources	10
Link Length (meters)	122
Volume/Baseline (VPH)	408
Particle Size Multiplier (g/mi)	1.0
Road Surface Silt Loading (g/m2)	0.02

On-Road Mobile Sources Emission Rate Computation

Average Vehicle Weight (tons)	2.4
Emfac2017 Emissions Run (g/mi)	0.015
Emfac2017 Emissions TW/BW (g/mi)	0.047
PM10 Reentrainment Mass Emission Rate (gr/mi)	0.131

For PM10 Reentrainment: $\text{Mass Emission Rate (gr/mile)} = ((\text{Particulate PM10 Base Emission Factor}) \times (\text{Road Surface Silt Loading})^{0.91} \times (\text{Gross Vehicle Weight})^{1.02}) + (\text{Emfac2014 Emissions})$
 $\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$

PM10 Reentrainment Emission Rate (gr/sec)	0.001129
PM10 Reentrainment Emission Rate (gr/sec/source)	1.13E-04

NB ON/WESTERN (Sources N_ON_W_1 to N_ON_W_28)

PM10 Emissions

Number of Sources	28
Link Length (meters)	222
Volume/Baseline (VPH)	518
Particle Size Multiplier (g/mi)	1.0
Road Surface Silt Loading (g/m2)	0.02
Average Vehicle Weight (tons)	2.4
Emfac2017 Emissions Run (g/mi)	0.0033
Emfac2017 Emissions TW/BW (g/mi)	0.047
PM10 Reentrainment Mass Emission Rate (gr/mi)	0.120

For PM10 Reentrainment: $\text{Mass Emission Rate (gr/mile)} = ((\text{Particulate PM10 Base Emission Factor}) \times (\text{Road Surface Silt Loading})^{0.91} \times (\text{Gross Vehicle Weight})^{1.02}) + (\text{Emfac2014 Emissions})$
 $\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$

PM10 Reentrainment Emission Rate (gr/sec)	0.002377
PM10 Reentrainment Emission Rate (gr/sec/source)	8.49E-05

On-Road Mobile Sources
Emission Rate Computation

Average Speed Scenario

NB/Route 101 (Sources N_M_1 to N_M_13)

PM2.5 Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	4904
Particle Size Multiplier (g/mi)	0.25
Road Surface Silt Loading (g/m2)	0.02
Average Vehicle Weight (tons)	2.4
Emfac2017 Emissions Run (g/mi)	0.0016
Emfac2017 Emissions TW/BW (g/mi)	0.019
PM2.5 Reentrainment Mass Emission Rate (gr/mi)	0.038

For PM2.5 Reentrainment: Mass Emission Rate (gr/mile) = ((Particulate PM2.5 Base Emission Factor) x (Road Surface Silt Loading)^{0.91} x (Gross Vehicle Weight)^{1.02}) + (Emfac2014 Emissions)
Emission Rate (gr/sec) = ((Mass Emission Rate x Volume/Baseline)/(1609.3 m/mile) x (3600 sec/hr)) x (Link Length)

PM2.5 Reentrainment Emission Rate (gr/sec)	0.014783
PM2.5 Reentrainment Emission Rate (gr/sec/source)	1.14E-03

SB/Route 101 (Sources S_M_1 to S_M_13)

PM2.5 Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	3670
Particle Size Multiplier (g/mi)	0.25
Road Surface Silt Loading (g/m2)	0.02
Average Vehicle Weight (tons)	2.4
Emfac2017 Emissions Run (g/mi)	0.0014
Emfac2017 Emissions TW/BW (g/mi)	0.019
PM2.5 Reentrainment Mass Emission Rate (gr/mi)	0.038

For PM2.5 Reentrainment: Mass Emission Rate (gr/mile) = ((Particulate PM2.5 Base Emission Factor) x (Road Surface Silt Loading)^{0.91} x (Gross Vehicle Weight)^{1.02}) + (Emfac2014 Emissions)
Emission Rate (gr/sec) = ((Mass Emission Rate x Volume/Baseline)/(1609.3 m/mile) x (3600 sec/hr)) x (Link Length)

PM2.5 Reentrainment Emission Rate (gr/sec)	0.011005
PM2.5 Reentrainment Emission Rate (gr/sec/source)	8.47E-04

SB OFF/WESTERN (Sources S_OFF_W_1 to S_OFF_W_10)

PM2.5 Emissions

Number of Sources	10
Link Length (meters)	122
Volume/Baseline (VPH)	408
Particle Size Multiplier (g/mi)	0.25
Road Surface Silt Loading (g/m2)	0.02

On-Road Mobile Sources Emission Rate Computation

Average Vehicle Weight (tons)	2.4
Emfac2017 Emissions Run (g/mi)	0.014
Emfac2017 Emissions TW/BW (g/mi)	0.019
PM2.5 Reentrainment Mass Emission Rate (gr/mi)	0.050

For PM2.5 Reentrainment: $\text{Mass Emission Rate (gr/mile)} = ((\text{Particulate PM2.5 Base Emission Factor}) \times (\text{Road Surface Silt Loading})^{0.91} \times (\text{Gross Vehicle Weight})^{1.02}) + (\text{Emfac2014 Emissions})$
 $\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$

PM2.5 Reentrainment Emission Rate (gr/sec)	0.000433
PM2.5 Reentrainment Emission Rate (gr/sec/source)	4.33E-05

NB ON/WESTERN (Sources N_ON_W_1 to N_ON_W_28)

PM2.5 Emissions

Number of Sources	28
Link Length (meters)	222
Volume/Baseline (VPH)	518
Particle Size Multiplier (g/mi)	0.25
Road Surface Silt Loading (g/m2)	0.02
Average Vehicle Weight (tons)	2.4
Emfac2017 Emissions Run (g/mi)	0.0031
Emfac2017 Emissions TW/BW (g/mi)	0.019
PM2.5 Reentrainment Mass Emission Rate (gr/mi)	0.039

For PM2.5 Reentrainment: $\text{Mass Emission Rate (gr/mile)} = ((\text{Particulate PM2.5 Base Emission Factor}) \times (\text{Road Surface Silt Loading})^{0.91} \times (\text{Gross Vehicle Weight})^{1.02}) + (\text{Emfac2014 Emissions})$
 $\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$

PM2.5 Reentrainment Emission Rate (gr/sec)	0.000783
PM2.5 Reentrainment Emission Rate (gr/sec/source)	2.80E-05

On-Road Mobile Sources
Emission Rate Computation

Average Speed Scenario

NB/Route 101 (Sources N_M_1 to N_M_13)

TOG GAS Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	4699
Pollutant Mass Emission Rate (gr/mi)	0.003133

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00117
Pollutant Emission Rate (gr/sec/source)	8.99E-05

SB/Route 101 (Sources S_M_1 to S_M_13)

TOG GAS Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	3517
Pollutant Mass Emission Rate (gr/mi)	0.002876

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00080
Pollutant Emission Rate (gr/sec/source)	6.18E-05

SB OFF/WESTERN (Sources S_OFF_W_1 to S_OFF_W_10)

TOG GAS Emissions

Number of Sources	10
Link Length (meters)	122
Volume/Baseline (VPH)	391
Pollutant Mass Emission Rate (gr/mi)	0.032790

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00027
Pollutant Emission Rate (gr/sec/source)	2.70E-05

NB ON/WESTERN (Sources N_ON_W_1 to N_ON_W_28)

TOG GAS Emissions

Number of Sources	28
Link Length (meters)	222
Volume/Baseline (VPH)	496
Pollutant Mass Emission Rate (gr/mi)	0.006824

On-Road Mobile Sources
Emission Rate Computation

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00013
Pollutant Emission Rate (gr/sec/source)	4.63E-06

Minimum Speed Scenario

NB/Route 101 (Sources N_M_1 to N_M_13)

TOG GAS Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	1357
Pollutant Mass Emission Rate (gr/mi)	0.021845

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00235
Pollutant Emission Rate (gr/sec/source)	1.81E-04

SB/Route 101 (Sources S_M_1 to S_M_13)

TOG GAS Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	2806
Pollutant Mass Emission Rate (gr/mi)	0.021845

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00487
Pollutant Emission Rate (gr/sec/source)	3.74E-04

SB OFF/WESTERN (Sources S_OFF_W_1 to S_OFF_W_10)

TOG GAS Emissions

Number of Sources	10
Link Length (meters)	122
Volume/Baseline (VPH)	391
Pollutant Mass Emission Rate (gr/mi)	0.032790

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00027
Pollutant Emission Rate (gr/sec/source)	2.70E-05

On-Road Mobile Sources
Emission Rate Computation

NB ON/WESTERN (Sources N_ON_W_1 to N_ON_W_28)

TOG GAS Emissions

Number of Sources	28
Link Length (meters)	222
Volume/Baseline (VPH)	496
Pollutant Mass Emission Rate (gr/mi)	0.006824

Emission Rate (gr/sec) = ((Mass Emission Rate x Volume/Baseline)/(1609.3 m/mile) x (3600 sec/hr)) x (Link Length)

Pollutant Emission Rate (gr/sec)	0.00013
Pollutant Emission Rate (gr/sec/source)	4.63E-06

On-Road Mobile Sources
Emission Rate Computation

Average Speed Scenario

NB/Route 101 (Sources N_M_1 to N_M_13)

TOG DSL Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	205
Pollutant Mass Emission Rate (gr/mi)	0.005579

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00009
Pollutant Emission Rate (gr/sec/source)	6.99E-06

SB/Route 101 (Sources S_M_1 to S_M_13)

TOG DSL Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	153
Pollutant Mass Emission Rate (gr/mi)	0.005336

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00006
Pollutant Emission Rate (gr/sec/source)	4.99E-06

SB OFF/WESTERN (Sources S_OFF_W_1 to S_OFF_W_10)

TOG DSL Emissions

Number of Sources	10
Link Length (meters)	122
Volume/Baseline (VPH)	17
Pollutant Mass Emission Rate (gr/mi)	0.140447

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00005
Pollutant Emission Rate (gr/sec/source)	5.03E-06

NB ON/WESTERN (Sources N_ON_W_1 to N_ON_W_28)

TOG DSL Emissions

Number of Sources	28
Link Length (meters)	222
Volume/Baseline (VPH)	22
Pollutant Mass Emission Rate (gr/mi)	0.013341

On-Road Mobile Sources Emission Rate Computation

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00001
Pollutant Emission Rate (gr/sec/source)	4.02E-07

Minimum Speed Scenario

NB/Route 101 (Sources N_M_1 to N_M_13)

TOG DSL Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	59
Pollutant Mass Emission Rate (gr/mi)	0.093631

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00044
Pollutant Emission Rate (gr/sec/source)	3.37E-05

SB/Route 101 (Sources S_M_1 to S_M_13)

TOG DSL Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	122
Pollutant Mass Emission Rate (gr/mi)	0.093631

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00091
Pollutant Emission Rate (gr/sec/source)	6.98E-05

SB OFF/WESTERN (Sources S_OFF_W_1 to S_OFF_W_10)

TOG DSL Emissions

Number of Sources	10
Link Length (meters)	122
Volume/Baseline (VPH)	17
Pollutant Mass Emission Rate (gr/mi)	0.140447

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00005
Pollutant Emission Rate (gr/sec/source)	5.03E-06

On-Road Mobile Sources
Emission Rate Computation

NB ON/WESTERN (Sources N_ON_W_1 to N_ON_W_28)

TOG DSL Emissions

Number of Sources	28
Link Length (meters)	222
Volume/Baseline (VPH)	22
Pollutant Mass Emission Rate (gr/mi)	0.013341

Emission Rate (gr/sec) = ((Mass Emission Rate x Volume/Baseline)/(1609.3 m/mile) x (3600 sec/hr)) x (Link Length)

Pollutant Emission Rate (gr/sec)	0.00001
Pollutant Emission Rate (gr/sec/source)	4.02E-07

On-Road Mobile Sources
Emission Rate Computation

Average Speed Scenario

NB/Route 101 (Sources N_M_1 to N_M_13)

DSL Particulate Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	205
Pollutant Mass Emission Rate (gr/mi)	0.015

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00024
Pollutant Emission Rate (gr/sec/source)	1.88E-05

SB/Route 101 (Sources S_M_1 to S_M_13)

DSL Particulate Emissions

Number of Sources	13
Link Length (meters)	460
Volume/Baseline (VPH)	153
Pollutant Mass Emission Rate (gr/mi)	0.013

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00016
Pollutant Emission Rate (gr/sec/source)	1.21E-05

SB OFF/WESTERN (Sources S_OFF_W_1 to S_OFF_W_10)

DSL Particulate Emissions

Number of Sources	10
Link Length (meters)	122
Volume/Baseline (VPH)	17
Pollutant Mass Emission Rate (gr/mi)	0.038

$$\text{Emission Rate (gr/sec)} = ((\text{Mass Emission Rate} \times \text{Volume/Baseline}) / (1609.3 \text{ m/mile}) \times (3600 \text{ sec/hr})) \times (\text{Link Length})$$

Pollutant Emission Rate (gr/sec)	0.00001
Pollutant Emission Rate (gr/sec/source)	1.36E-06

NB ON/WESTERN (Sources N_ON_W_1 to N_ON_W_28)

DSL Particulate Emissions

Number of Sources	28
Link Length (meters)	222
Volume/Baseline (VPH)	22
Pollutant Mass Emission Rate (gr/mi)	0.024

On-Road Mobile Sources
Emission Rate Computation

Emission Rate (gr/sec) = ((Mass Emission Rate x Volume/Baseline)/(1609.3 m/mile) x (3600 sec/hr)) x (Link Length)

Pollutant Emission Rate (gr/sec)	0.00002
Pollutant Emission Rate (gr/sec/source)	7.23E-07

APPENDIX C

Dispersion Model Input Table

Dispersion Model Input Table

ID	X	Y	ZS	RH	SY	SZ	CO 1	CO 8	NOx 1	PM10 24 A	PM2.5 24	TOG Gas 1	TOG Gas 8 C	TOG DSL 1	TOG DSL 8	DPM C
N_M_1	379228.5	3773327.2	97.1	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_2	379201.2	3773350.2	97.5	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_3	379172.8	3773371.7	97.8	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_4	379145.4	3773393.0	98.2	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_5	379117.3	3773415.0	98.6	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_6	379089.4	3773434.8	98.9	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_7	379061.6	3773458.4	99.3	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_8	379033.3	3773479.5	99.6	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_9	379005.7	3773501.6	100.0	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_10	378978.2	3773524.0	100.3	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_11	378951.9	3773547.3	100.7	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_12	378926.2	3773571.6	101.0	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
N_M_13	378902.1	3773599.0	101.4	0	16.47	2.55	2.07E-02	2.82E-02	2.71E-03	3.54E-03	1.14E-03	1.81E-04	8.99E-05	3.37E-05	6.99E-06	1.88E-05
S_M_1	378894.1	3773578.6	101.4	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_2	378920.3	3773552.1	101.0	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_3	378944.1	3773530.2	100.6	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_4	378971.1	3773506.0	100.2	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_5	378998.8	3773483.9	99.8	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_6	379026.8	3773462.3	99.4	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_7	379054.6	3773440.8	98.9	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_8	379082.8	3773418.9	98.5	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_9	379110.5	3773397.3	98.1	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_10	379138.3	3773375.2	97.7	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_11	379166.2	3773353.7	97.3	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_12	379194.3	3773331.9	96.9	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_M_13	379221.5	3773309.5	96.5	0	16.47	2.55	4.29E-02	2.09E-02	5.60E-03	2.64E-03	8.47E-04	3.74E-04	6.18E-05	6.98E-05	4.99E-06	1.21E-05
S_OFF_W_1	379085.0	3773405.0	98.5	0	5.67	2.23	3.09E-03	3.09E-03	4.04E-04	1.13E-04	4.33E-05	2.70E-05	2.70E-05	5.03E-06	5.03E-06	1.36E-06
S_OFF_W_2	379094.2	3773396.7	98.7	0	5.67	2.23	3.09E-03	3.09E-03	4.04E-04	1.13E-04	4.33E-05	2.70E-05	2.70E-05	5.03E-06	5.03E-06	1.36E-06
S_OFF_W_3	379103.4	3773388.7	99.0	0	5.67	2.23	3.09E-03	3.09E-03	4.04E-04	1.13E-04	4.33E-05	2.70E-05	2.70E-05	5.03E-06	5.03E-06	1.36E-06
S_OFF_W_4	379112.1	3773380.6	99.3	0	5.67	2.23	3.09E-03	3.09E-03	4.04E-04	1.13E-04	4.33E-05	2.70E-05	2.70E-05	5.03E-06	5.03E-06	1.36E-06
S_OFF_W_5	379121.1	3773372.1	99.5	0	5.67	2.23	3.09E-03	3.09E-03	4.04E-04	1.13E-04	4.33E-05	2.70E-05	2.70E-05	5.03E-06	5.03E-06	1.36E-06
S_OFF_W_6	379129.8	3773363.8	99.8	0	5.67	2.23	3.09E-03	3.09E-03	4.04E-04	1.13E-04	4.33E-05	2.70E-05	2.70E-05	5.03E-06	5.03E-06	1.36E-06
S_OFF_W_7	379138.1	3773354.4	100.1	0	5.67	2.23	3.09E-03	3.09E-03	4.04E-04	1.13E-04	4.33E-05	2.70E-05	2.70E-05	5.03E-06	5.03E-06	1.36E-06
S_OFF_W_8	379144.8	3773344.5	100.3	0	5.67	2.23	3.09E-03	3.09E-03	4.04E-04	1.13E-04	4.33E-05	2.70E-05	2.70E-05	5.03E-06	5.03E-06	1.36E-06
S_OFF_W_9	379150.1	3773333.4	100.6	0	5.67	2.23	3.09E-03	3.09E-03	4.04E-04	1.13E-04	4.33E-05	2.70E-05	2.70E-05	5.03E-06	5.03E-06	1.36E-06
S_OFF_W_10	379154.2	3773322.3	100.9	0	5.67	2.23	3.09E-03	3.09E-03	4.04E-04	1.13E-04	4.33E-05	2.70E-05	2.70E-05	5.03E-06	5.03E-06	1.36E-06
N_ON_W_1	379208.6	3773395.0	104.9	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_2	379200.8	3773397.3	104.6	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_3	379193.1	3773400.4	104.4	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_4	379185.9	3773403.9	104.2	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_5	379179.0	3773407.8	104.0	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_6	379172.0	3773411.5	103.8	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_7	379164.7	3773415.5	103.6	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_8	379158.0	3773419.1	103.4	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_9	379151.0	3773422.8	103.2	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_10	379144.0	3773426.6	103.0	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_11	379137.2	3773430.2	102.8	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_12	379130.0	3773434.1	102.6	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_13	379123.2	3773437.8	102.4	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_14	379115.9	3773441.5	102.2	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_15	379109.3	3773445.1	102.0	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_16	379102.1	3773448.9	101.8	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_17	379095.1	3773452.8	101.6	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_18	379088.5	3773456.6	101.4	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_19	379081.7	3773460.7	101.2	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_20	379074.5	3773464.7	101.0	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_21	379067.9	3773468.9	100.8	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_22	379061.2	3773472.9	100.6	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_23	379054.6	3773477.5	100.4	0	3.72	2.18	1.66E-03	1.66E-03	1.69E-04	8.49E-05	2.80E-05	4.63E-06	4.63E-06	4.02E-07	4.02E-07	7.23E-07
N_ON_W_24	379047.8	3773481.6	100.2	0	3.72	2.18	1.66E-03									

APPENDIX D

Exposure Duration and Residency

Exposure Duration and Residency

In Section 6.0 of the health risk assessment (HRA), exposure duration is discussed relative to residential occupancy. As noted, the HRA employed the USEPA's guidance to develop viable dose estimates based upon reasonable maximum exposures, defined as the "highest exposure that is reasonably expected to occur." According to the USEPA,

Reasonableness refers to the findings of the risk assessment in the context of the state-of-the science, the default assumptions and the science policy choices made in the risk assessment. It demonstrates that the risk assessment process followed an acceptable, overt logic path and retained common sense in applying relevant guidance. The assessment is based on sound judgment. Reasonableness is achieved when: a) the risk characterization is determined to be sound by the scientific community, EPA risk managers, and the lay public, because the components of the risk characterization are well integrated into an overall conclusion of risk which is complete, informative, well balanced and useful for decision making b) the characterization is based on the best available scientific information c) the policy judgments required to carry out the risk analyses use common sense given the statutory requirements and Agency guidance d) the assessment uses generally accepted scientific knowledge e) appropriate plausible alternative estimates of risk under various candidate risk management alternatives are identified and explained.

As such, the USEPA (*Risk Assessment Guidance for Superfund -Volume 1: Human Health Evaluation Manual*) introduced the concept of reasonable maximum exposures (RME's). This approach was intended to estimate a conservative exposure case (i.e., well above the average case) that is representative of the range of possible exposures. Activity patterns for population mobility are specifically addressed in the *Exposure Factors Handbook* (U.S. EPA, 1997) whereby lifetime risk values for residents account for an exposure duration of 30 years (95th percentile).

Additionally, population residency times utilizing Integrated Public Use Microdata Series (IPUMS-USA) census data was reviewed to validate the use of a 30 year exposure duration. The IPUMS-USA database consists of more than fifty samples of the American population drawn from fifteen federal censuses and from the American Community Surveys (ACS). ACS is a nationwide survey that collects and produces population and housing information every year from three million selected housing unit addresses across every county in the nation. IPUMS-USA samples, which draw on every surviving census from 1850 to 2000 and the 2000 to 2009 ACS samples, collectively constitute the quantitative information on long term changes in the American population. Based upon this review, the most recent IPUMS-USA ACS data (2006 to 2009) show that the percentage of California households with a residency period of 30 years or greater is less than 9%. As such, over 91% of California residence had lived in their current location for less than 30 years. The data also show that over 63% of Californians have lived at their current residence for 9 years or less.

Furthermore, in a study prepared by the Real Estate Research Institute (*Duration of Residence in the Rental Housing Market, January 2002*) the duration of residency in rental housing was evaluated. The study utilized data from the Bureau of Labor Statistics' (BLS) Consumer Price Index (CPI) to construct the duration of rental occupancy for metropolitan areas from 1987-1998. American Housing Survey and related metropolitan economic data were additionally employed to proxy time-varying covariates of duration of residence. Results of the study showed that the duration of residency across individual units and market segments for 3, 5

and 10 years were 62.6, 78.6 and 96.7 percent, respectively. As such, 30 years is a reasonable estimate of the 90th or 95th percentile of residency duration within a population.

The California Environmental Quality Act (CEQA) requires an impact analyses to consider reasonably foreseeable factors and not to speculate beyond what is reasonable. There is no evidence that any recognizable portion of residents remain within a specific residence for 70 years. To assume they would remain for 70 years is not reasonably foreseeable. Furthermore, CEQA prohibits mitigation measures that are not rationally related to foreseeable impacts. Therefore, no mitigation would rationally be related to a speculative impact of a 70 year exposure because an exposure time of such length is neither reasonable nor supported by any evidence. CEQA's purpose is to provide public disclosure of likely and reasonably foreseeable impacts. A conservative 30 year exposure is reasonable and is supported by substantial evidence.

APPENDIX E

Dispersion Model Output Summary Files

[illegible]

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
10 01 01 01 17.7 0 -999. -99.00 284.9 99.0 -99.00 -99.00
10 01 01 01 21.3 1 38. 3.10 -999.0 99.0 -99.00 -99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Carbon Monoxide (CO) / Minimum Speed Scenario

*** 05/11/18
14:02:28
PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT 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
ALL HIGH 1ST HIGH VALUE IS	31.96469	ON 10100517: AT (	379245.00, 3773644.00, 109.00, 494.50,	0.00)	DC

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Carbon Monoxide (CO) / Minimum Speed Scenario

*** 05/11/18
14:02:28
PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 warning Message(s)
A Total of 808 Informational Message(s)
A Total of 43824 Hours Were Processed
A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME W187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

```

***      MODEL SETUP OPTIONS SUMMARY      ***

```

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

```
-- DEPOSITION LOGIC --
```

DEPOSITION LOGS
**NO GAS DEPOSITION Data Provided.

**NO PARTICLE DEPOSITION Data Provided.

```
**Mode1 Uses NO DRY DEPLETION.  DRYDPLT = F
```

```
**Model Uses NO WET DEPLETION.  WETDPLT = F
```

```
**Model Uses URBAN Dispersion Algorithm for the SBL for 64 Source(s),
for Total of 1 Urban Area(s):
```

****Model Uses Regulatory DEFAULT Options:**

1. Stack-tip Downwash.

2. Model Accounts for ELEVated Terrain Effects.

2. Model Accounts for Elevated T
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* BETA option for SBL in AERMET

TEMP_Sub - Meteorological data includes TEMP substitutions

****Model Accepts FLAGPOLE Receptor Heights.**

**The User Specified a Pollutant Type of: OTHER

**Model Calculates 1 Short Term Average(s) of: 8-HR

****This Run Includes:** 64 Source(s); 1 Source Group(s); and 90 Receptor(s)

```
with:      0 POINT(s), including
and:      0 POINTCAP(s) and      0 POINTHOR(s)
and:      64 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.**

**The AERMET Input Meteorological Data Version Date: 16216

```

**Output Options Selected:

```

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) = 87.00 ; 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 = 3.5 MB of RAM.

```

**Input Runstream File:      SW_CO_8_THIRD.DTA

```

```
Input Runstream File: SW_CO_8_THIRD.DTA
**Output Print File: SW_CO_8_THIRD.LST
```

**File for Summary of Results: F:\WD Passport\sunset western\model2\SW_CO_8_THIRD.SUM

*** MODELOPTs: ReqDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

```
*** MODELOPTs:  ReqDFault  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*
```

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

[illegible]

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)

ALERT - VERSION 10210 Carbon Monoxide (CO) / Average Speed Section 10

```
*** MODELOPTs:  ReqDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*
```

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

```
Surface file: CELA_v9.SFC
Profile file: CELA_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 99999
Name: UNKNOWN
Year: 2010
```

Met Version: 16216

```
Upper air station no.: 3190
Name: UNKNOWN
Year: 2010
```

First 24 hours of scalar data																						
YR	MO	DAY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DAY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigma	sigmaA	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western *** 05/11/18
 *** AERMET - VERSION 16216 *** *** Carbon Monoxide (CO) / Average Speed Scenario *** 14:32:14
 *** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U* PAGE 4

*** 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
ALL HIGH 1ST HIGH VALUE IS	16.05139m	ON 10060524: AT (	379245.00, 3773644.00, 109.00, 494.50,	9.40)	DC

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western *** 05/11/18
 *** AERMET - VERSION 16216 *** *** Carbon Monoxide (CO) / Average Speed Scenario *** 14:32:14
 *** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U* PAGE 5

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

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

A Total of	0 Fatal Error Message(s)
A Total of	4 Warning Message(s)
A Total of	808 Informational Message(s)
A Total of	43824 Hours Were Processed
A Total of	4 Calm Hours Identified
A Total of	804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****

ME W186 251	MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used	0.50
ME W187 251	MEOPEN: ADJ_U* Option for Low winds used in AERMET	
MX W450 17521	CHKDAT: Record Out of Sequence in Meteorological File at:	14010101
MX W450 17521	CHKDAT: Record Out of Sequence in Meteorological File at:	2 year gap

```

***      MODEL SETUP OPTIONS SUMMARY      ***

```

```

1.54, 3.09, 5.14, 8.23, 10.80,
*** AERMOD - VERSION 16216r *** *** Sunset/Western *** 05/11/18
*** AERMET - VERSION 16216 *** *** Nitrogen Dioxide (NO2) / Minimum Speed Scenario *** 14:58:52
PAGE 3

```

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT ARM2 URBAN ADJ_U*

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

Surface file: CELA_V9.SFC
Profile file: CELA_V9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 99999
Name: UNKNOWN
Year: 2010

Met Version: 16216

Upper air station no.: 3190
Name: UNKNOWN
Year: 2010

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/western ***
*** AERMET - VERSION 16216 *** *** Nitrogen Dioxide (NO2) / Minimum Speed Scenario ***

05/11/18
14:58:52
PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT ARM2 URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS 3.69553 AT (379245.00, 3773644.00, 109.00, 494.50, 0.00)	DC		
	2ND HIGHEST VALUE IS 3.55341 AT (379245.00, 3773662.00, 109.00, 494.50, 0.00)	DC		
	3RD HIGHEST VALUE IS 3.42159 AT (379245.00, 3773680.00, 109.00, 494.50, 0.00)	DC		
	4TH HIGHEST VALUE IS 3.29879 AT (379245.00, 3773698.00, 109.00, 494.50, 0.00)	DC		
	5TH HIGHEST VALUE IS 3.18391 AT (379245.00, 3773716.00, 109.00, 494.50, 0.00)	DC		
	6TH HIGHEST VALUE IS 3.15296 AT (379263.00, 3773644.00, 109.00, 494.50, 0.00)	DC		
	7TH HIGHEST VALUE IS 3.07598 AT (379245.00, 3773734.00, 109.00, 494.50, 0.00)	DC		
	8TH HIGHEST VALUE IS 3.06226 AT (379263.00, 3773662.00, 109.00, 494.50, 0.00)	DC		
	9TH HIGHEST VALUE IS 2.97600 AT (379263.00, 3773680.00, 109.00, 494.50, 0.00)	DC		
	10TH HIGHEST VALUE IS 2.97402 AT (379245.00, 3773752.00, 109.00, 494.50, 0.00)	DC		

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

*** AERMOD - VERSION 16216r *** *** Sunset/western ***
*** AERMET - VERSION 16216 *** *** Nitrogen Dioxide (NO2) / Minimum Speed Scenario ***

05/11/18
14:58:52
PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT ARM2 URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 2 Warning Message(s)
A Total of 304 Informational Message(s)
A Total of 8760 Hours were Processed
A Total of 3 Calm Hours Identified
A Total of 301 Missing Hours Identified (3.44 Percent)

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

***** WARNING MESSAGES *****
ME W186 253 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 253 MEOPEN: ADJ_U* Option for Low Winds used in AERMET


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Upper air station no.: 3190
Name: UNKNOWN
Year: 2010
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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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western *** 05/11/18
 *** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario *** 15:26:14
 PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 24-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
ALL HIGH 1ST HIGH VALUE IS	1.28317m	ON 14111524: AT (	379245.00, 3773644.00, 109.00, 494.50,	6.40)	DC

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western *** 05/11/18
 *** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario *** 15:26:14
 PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
 A Total of 4 Warning Message(s)
 A Total of 808 Informational Message(s)
 A Total of 43824 Hours Were Processed
 A Total of 4 Calm Hours Identified
 A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
 ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
 ME W187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

*** 05/11/18
*** 15:36:16
PAGE 1

PAGE 1

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. Angle = 0.0
0.10000E+07
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*** 05/11/18
*** 15:36:16
PAGE 2

PAGE 2

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1 1 1 1 1 1
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DATA FILE.

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*** 15:36:16

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Met Version: 16216

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
10 01 01 01 17.7 0 -999. -99.00 284.9 99.0 -99.00 -99.00
10 01 01 01 21.3 1 38. 3.10 -999.0 99.0 -99.00 -99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario

*** 05/11/18
15:36:16
PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 24-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
ALL HIGH 1ST HIGH VALUE IS	1.22433	ON 10061124: AT (	379245.00, 3773644.00, 109.00, 494.50,	9.40)	DC

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario

*** 05/11/18
15:36:16
PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 warning Message(s)
A Total of 808 Informational Message(s)
A Total of 43824 Hours were Processed
A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME W187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

Met Version: 16216

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	
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7				
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7				
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7				
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7				
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7				
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7				
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7				
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7				
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7				
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7				
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7				
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7				
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7				
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7				
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7				
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7				
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7				
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7				
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7				
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7				
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7				
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7				
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7				
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7				

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
10 01 01 01 17.7 0 -999. -99.00 284.9 99.0 -99.00 -99.00
10 01 01 01 21.3 1 38. 3.10 -999.0 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 16216r *** *** Sunset/western *** 05/11/18
*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario *** 15:46:03
*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U* PAGE 4

*** THE SUMMARY OF HIGHEST 24-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
ALL HIGH 1ST HIGH VALUE IS	1.17759	ON 11041824: AT (	379245.00, 3773644.00, 109.00, 494.50, 12.50)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
*** AERMOD - VERSION 16216r *** *** Sunset/western *** 05/11/18
*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario *** 15:46:03
*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U* PAGE 5

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 808 Informational Message(s)
A Total of 43824 Hours were Processed
A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME W187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

```
Upper air station no.: 3190
Name: UNKNOWN
Year: 2010
```

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7	
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7	
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7	
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7	
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7	
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7	
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7	
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7	
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7	
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7	
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7	
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7	
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7	
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7	
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7	
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7	
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7	
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7	
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7	
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7	
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7	
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7	
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7	
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7	

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
10 01 01 01 17.7 0 -999. -99.00 284.9 99.0 -99.00 -99.00
10 01 01 01 21.3 1 38. 3.10 -999.0 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 16216r *** *** Sunset/western *** 05/11/18
*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario *** 15:59:49
*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U* PAGE 4

*** THE SUMMARY OF HIGHEST 24-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
ALL HIGH 1ST HIGH VALUE IS	1.08146	ON 11041824: AT (	379245.00, 3773644.00, 109.00, 494.50, 15.50)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/western *** 05/11/18
*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario *** 15:59:49
*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U* PAGE 5

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 808 Informational Message(s)
A Total of 43824 Hours Were Processed
A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME W186 251 MEOPEN: THRESH_IMIN 1-min ASOS wind speed threshold used 0.50
ME W187 251 MEOPEN: ADJ_U* Option for Low Winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario

*** 05/11/18
 16:10:03
 PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 24-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
ALL HIGH 1ST HIGH VALUE IS	0.93163	ON 11041824: AT (	379245.00, 3773644.00, 109.00, 494.50, 18.60)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario

*** 05/11/18
 16:10:03
 PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of	0 Fatal Error Message(s)
A Total of	4 Warning Message(s)
A Total of	808 Informational Message(s)
A Total of	43824 Hours Were Processed
A Total of	4 Calm Hours Identified
A Total of	804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****

ME w186	251	MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used	0.50
ME w187	251	MEOPEN: ADJ_U* Option for Low winds used in AERMET	
MX w450	17521	CHKDAT: Record Out of Sequence in Meteorological File at:	14010101
MX w450	17521	CHKDAT: Record Out of Sequence in Meteorological File at:	2 year gap

Met Version: 16216

Surface station no.: 99999
Name: UNKNOWN
Year: 2010

Upper air station no.: 3190
Name: UNKNOWN
Year: 2010

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western

*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario

05/11/18

16:27:18

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*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

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

**

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS 0.89119 AT (379245.00, 3773644.00, 109.00, 494.50, 6.40) DC			
	2ND HIGHEST VALUE IS 0.84195 AT (379263.00, 3773644.00, 109.00, 494.50, 6.40) DC			
	3RD HIGHEST VALUE IS 0.82535 AT (379245.00, 3773662.00, 109.00, 494.50, 6.40) DC			
	4TH HIGHEST VALUE IS 0.79497 AT (379281.00, 3773644.00, 109.00, 494.50, 6.40) DC			
	5TH HIGHEST VALUE IS 0.78251 AT (379263.00, 3773662.00, 109.00, 494.50, 6.40) DC			
	6TH HIGHEST VALUE IS 0.76485 AT (379245.00, 3773680.00, 109.00, 494.50, 6.40) DC			
	7TH HIGHEST VALUE IS 0.75034 AT (379299.00, 3773644.00, 109.00, 494.50, 6.40) DC			
	8TH HIGHEST VALUE IS 0.74138 AT (379281.00, 3773662.00, 109.00, 494.50, 6.40) DC			
	9TH HIGHEST VALUE IS 0.72759 AT (379263.00, 3773680.00, 109.00, 494.50, 6.40) DC			
	10TH HIGHEST VALUE IS 0.70952 AT (379245.00, 3773698.00, 109.00, 494.50, 6.40) DC			

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western

*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario

05/11/18

16:27:18

PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 808 Informational Message(s)
A Total of 8784 Hours Were Processed
A Total of 0 Calm Hours Identified
A Total of 71 Missing Hours Identified (0.81 Percent)

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

***** WARNING MESSAGES *****
ME W186 252 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME W187 252 MEOPEN: ADJ_U* Option for Low Winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

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

```
**Model Uses NO WET DEPLETION.  WETDPLT = F
```

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Urban Population = 9818605.0 ; Urban Roughness Length = 1.000 m
```

6. Urban Roughness Length of 1.0 Meter Assumed.

TEMP_Sub - Meteorological data includes TEMP substitutions

**Model calculates ANNUAL Averages Only

and: 0 BUOYANT LINE source(s) with 0 line(s)

**The AERMET Input Meteorological Data Version Date: 16216

Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

****Approximate Storage Requirements of Model = 3.5 MB of RAM.**

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

[illegible]

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

*** MODELOPTs: ReqDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

Met Version: 16216

Surface station no.: 99999
Name: UNKNOWN
Year: 2010

Upper air station no.: 3190
Name: UNKNOWN
Year: 2010

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western ***
*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario ***

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*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS 0.83996 AT (379245.00, 3773644.00, 109.00, 494.50, 9.40)	DC		
	2ND HIGHEST VALUE IS 0.79680 AT (379263.00, 3773644.00, 109.00, 494.50, 9.40)	DC		
	3RD HIGHEST VALUE IS 0.77956 AT (379245.00, 3773662.00, 109.00, 494.50, 9.40)	DC		
	4TH HIGHEST VALUE IS 0.75515 AT (379281.00, 3773644.00, 109.00, 494.50, 9.40)	DC		
	5TH HIGHEST VALUE IS 0.74191 AT (379263.00, 3773662.00, 109.00, 494.50, 9.40)	DC		
	6TH HIGHEST VALUE IS 0.72370 AT (379245.00, 3773680.00, 109.00, 494.50, 9.40)	DC		
	7TH HIGHEST VALUE IS 0.71517 AT (379299.00, 3773644.00, 109.00, 494.50, 9.40)	DC		
	8TH HIGHEST VALUE IS 0.70534 AT (379281.00, 3773662.00, 109.00, 494.50, 9.40)	DC		
	9TH HIGHEST VALUE IS 0.69088 AT (379263.00, 3773680.00, 109.00, 494.50, 9.40)	DC		
	10TH HIGHEST VALUE IS 0.67707 AT (379317.00, 3773644.00, 109.00, 494.50, 9.40)	DC		

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western ***
*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario ***

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*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 570 Informational Message(s)
A Total of 8760 Hours were Processed
A Total of 0 Calm Hours Identified
A Total of 139 Missing Hours Identified (1.59 Percent)

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

***** WARNING MESSAGES *****
ME W186 252 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME W187 252 MEOPEN: ADJ_U* Option for Low winds used in AERMET
MX W450 17521 CHKDAT: Record out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record out of Sequence in Meteorological File at: 2 year gap

Surface station no.: 99999
Name: UNKNOWN
Year: 2010

Upper air station no.: 3190
Name: UNKNOWN
Year: 2010

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
10 01 01 01 17.7 0 -999. -99.00 284.9 99.0 -99.00 -99.00
10 01 01 01 21.3 1 38. 3.10 -999.0 99.0 -99.00 -99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western ***
*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario ***

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*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS 0.76456 AT (379245.00, 3773644.00, 109.00, 494.50, 12.50)	DC		
	2ND HIGHEST VALUE IS 0.72843 AT (379263.00, 3773644.00, 109.00, 494.50, 12.50)	DC		
	3RD HIGHEST VALUE IS 0.71159 AT (379245.00, 3773662.00, 109.00, 494.50, 12.50)	DC		
	4TH HIGHEST VALUE IS 0.69306 AT (379281.00, 3773644.00, 109.00, 494.50, 12.50)	DC		
	5TH HIGHEST VALUE IS 0.67988 AT (379263.00, 3773662.00, 109.00, 494.50, 12.50)	DC		
	6TH HIGHEST VALUE IS 0.66227 AT (379245.00, 3773680.00, 109.00, 494.50, 12.50)	DC		
	7TH HIGHEST VALUE IS 0.65874 AT (379299.00, 3773644.00, 109.00, 494.50, 12.50)	DC		
	8TH HIGHEST VALUE IS 0.64864 AT (379281.00, 3773662.00, 109.00, 494.50, 12.50)	DC		
	9TH HIGHEST VALUE IS 0.63446 AT (379263.00, 3773680.00, 109.00, 494.50, 12.50)	DC		
	10TH HIGHEST VALUE IS 0.62579 AT (379317.00, 3773644.00, 109.00, 494.50, 12.50)	DC		

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western ***
*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario ***

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*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 570 Informational Message(s)
A Total of 8760 Hours Were Processed
A Total of 0 Calm Hours Identified
A Total of 139 Missing Hours Identified (1.59 Percent)

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

***** WARNING MESSAGES *****
ME W186 252 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME W187 252 MEOPEN: ADJ_U* Option For Low winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

[illegible]

Surface station no.: 99999
Name: UNKNOWN
Year: 2010

Upper air station no.: 3190
Name: UNKNOWN
Year: 2010

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
			1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
			1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
			1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
			1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
			1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
			1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
			1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
			1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
			1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
			1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
			1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
			1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
			1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
			1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
			1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
			1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
			1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
			1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
			1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
			1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
			1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
			1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
			1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

♀ *** AERMOD - VERSION 16216r *** *** Sunset/Western

*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario

05/11/18

16:49:51

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*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS 0.67868 AT (379245.00, 3773644.00, 109.00, 494.50, 15.50)	DC		
	2ND HIGHEST VALUE IS 0.64981 AT (379263.00, 3773644.00, 109.00, 494.50, 15.50)	DC		
	3RD HIGHEST VALUE IS 0.63440 AT (379245.00, 3773662.00, 109.00, 494.50, 15.50)	DC		
	4TH HIGHEST VALUE IS 0.62104 AT (379281.00, 3773644.00, 109.00, 494.50, 15.50)	DC		
	5TH HIGHEST VALUE IS 0.60887 AT (379263.00, 3773662.00, 109.00, 494.50, 15.50)	DC		
	6TH HIGHEST VALUE IS 0.59279 AT (379245.00, 3773680.00, 109.00, 494.50, 15.50)	DC		
	7TH HIGHEST VALUE IS 0.59273 AT (379299.00, 3773644.00, 109.00, 494.50, 15.50)	DC		
	8TH HIGHEST VALUE IS 0.58326 AT (379281.00, 3773662.00, 109.00, 494.50, 15.50)	DC		
	9TH HIGHEST VALUE IS 0.57023 AT (379263.00, 3773680.00, 109.00, 494.50, 15.50)	DC		
	10TH HIGHEST VALUE IS 0.56527 AT (379317.00, 3773644.00, 109.00, 494.50, 15.50)	DC		

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

♀ *** AERMOD - VERSION 16216r *** *** Sunset/Western

*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario

05/11/18

16:49:51

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*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 570 Informational Message(s)
A Total of 8760 Hours Were Processed
A Total of 0 Calm Hours Identified
A Total of 139 Missing Hours Identified (1.59 Percent)

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

***** WARNING MESSAGES *****
ME w186 252 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME w187 252 MEOPEN: ADJ_U* Option for Low winds used in AERMET
MX w450 17321 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX w450 17321 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

[illegible]

Surface station no.: 99999
Name: UNKNOWN
Year: 2010

Upper air station no.: 3190
Name: UNKNOWN
Year: 2010

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	
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7				
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7				
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7				
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7				
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7				
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7				
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7				
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7				
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7				
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7				
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7				
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7				
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7				
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7				
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7				
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7				
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7				
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7				
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7				
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7				
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7				
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7				
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7				
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7				

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western

*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario

*** 05/11/18
16:53:21
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*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS 0.58211 AT (379245.00, 3773644.00, 109.00, 494.50, 18.60)	DC		
	2ND HIGHEST VALUE IS 0.56003 AT (379263.00, 3773644.00, 109.00, 494.50, 18.60)	DC		
	3RD HIGHEST VALUE IS 0.54751 AT (379245.00, 3773662.00, 109.00, 494.50, 18.60)	DC		
	4TH HIGHEST VALUE IS 0.53757 AT (379281.00, 3773644.00, 109.00, 494.50, 18.60)	DC		
	5TH HIGHEST VALUE IS 0.52772 AT (379263.00, 3773662.00, 109.00, 494.50, 18.60)	DC		
	6TH HIGHEST VALUE IS 0.51516 AT (379299.00, 3773644.00, 109.00, 494.50, 18.60)	DC		
	7TH HIGHEST VALUE IS 0.51463 AT (379245.00, 3773680.00, 109.00, 494.50, 18.60)	DC		
	8TH HIGHEST VALUE IS 0.50747 AT (379281.00, 3773662.00, 109.00, 494.50, 18.60)	DC		
	9TH HIGHEST VALUE IS 0.49690 AT (379263.00, 3773680.00, 109.00, 494.50, 18.60)	DC		
	10TH HIGHEST VALUE IS 0.49323 AT (379317.00, 3773644.00, 109.00, 494.50, 18.60)	DC		

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western

*** AERMET - VERSION 16216 *** *** Particulates (PM10) / Average Speed Scenario

*** 05/11/18
16:53:21
PAGE 5

*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 570 Informational Message(s)
A Total of 8760 Hours Were Processed
A Total of 0 Calm Hours Identified
A Total of 139 Missing Hours Identified (1.59 Percent)

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

***** WARNING MESSAGES *****
ME W186 252 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME W187 252 MEOPEN: ADJ_U* Option for Low Winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western *** 05/12/18
 *** AERMET - VERSION 16216 *** *** Particulates (PM2.5) / Average Speed Scenario *** 10:19:26
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*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*
 *** THE SUMMARY OF HIGHEST 24-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
ALL HIGH 1ST HIGH VALUE IS	0.41390m	ON 14111524: AT (	379245.00, 3773644.00, 109.00, 494.50,	6.40)	DC

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western *** 05/12/18
 *** AERMET - VERSION 16216 *** *** Particulates (PM2.5) / Average Speed Scenario *** 10:19:26
 PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
 A Total of 4 warning Message(s)
 A Total of 808 Informational Message(s)
 A Total of 43824 Hours were Processed
 A Total of 4 Calm Hours Identified
 A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
 ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
 ME W187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western *** 05/12/18
 *** AERMET - VERSION 16216 *** *** Particulates (PM2.5) / Average Speed Scenario *** 10:04:14
 PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 24-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
ALL HIGH 1ST HIGH VALUE IS	0.39536	ON 10061124: AT (	379245.00, 3773644.00, 109.00, 494.50,	9.40)	DC

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western *** 05/12/18
 *** AERMET - VERSION 16216 *** *** Particulates (PM2.5) / Average Speed Scenario *** 10:04:14
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*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
 A Total of 4 Warning Message(s)
 A Total of 808 Informational Message(s)
 A Total of 43824 Hours Were Processed
 A Total of 4 Calm Hours Identified
 A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
 ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
 ME W187 251 MEOPEN: ADJ_U* Option for Low Winds used in AERMET
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap


```
*** MODELOPTs:  RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*
```

*** MODEL SETUP OPTIONS SUMMARY ***

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

-- DEPOSITION LOGIC --

**NO GAS DEPOSITION Data Provided.

NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.

```
**Mode1 Uses NO DRY DEPLETION.  DRYDPLT = F
```

```
**Model Uses NO WET DEPLETION.  WETDPLT = F
```

**Model Uses URBAN Dispersion Algorithm for the SBL for 64 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* BETA option for SBL in AERMET
TEMP_Sub - Meteorological data includes TEMP substitutions

****Model Accepts FLAGPOLE Receptor Heights.**

**The User Specified a Pollutant Type of: OTHER

**Model Calculates 1 Short Term Average(s) of: 24-HR

****This Run Includes:** 64 Source(s); 1 Source Group(s); and 90 Receptor(s)

```

with:      0 POINT(s), including
           0 POINTCAP(s) and      0 POINTHOR(s)
and:      64 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.**

**The AERMET Input Meteorological Data Version Date: 16216

```
**Output Options Selected:
```

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) = 87.00 ; 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 = 3.5 MB of RAM.**

```

**Input Runstream File:      SW_PM2.5_24_FOURTH.DTA

```

```

**Output Print File: SW_PM2.5_24_FOURTH.LST

```

**File for Summary of Results: D:\WD Passport\sunset western\model2\SW_PM2.5_24_FOURTH.SUM

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

[illegible]

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, *** 05/12/18
 *** AERMOT - VERSION 16216r *** *** Sunset/Western ***
 *** AERMET - VERSION 16216 *** *** Particulates (PM2.5) / Average Speed scenario *** 10:31:40

```
*** MODELOPTs:  ReqDFault  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*
```

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

```
Surface file: CELA_v9.SFC
Profile file: CELA_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 99999
Name: UNKNOWN
Year: 2010
```

Met Version: 16216

```
Upper air station no.: 3190
Name: UNKNOWN
Year: 2010
```

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
10 01 01 01 17.7 0 -999. -99.00 284.9 99.0 -99.00 -99.00
10 01 01 01 21.3 1 38. 3.10 -999.0 99.0 -99.00 -99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Particulates (PM2.5) / Average Speed Scenario

*** 05/12/18
*** 10:31:40
PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 24-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
ALL HIGH 1ST HIGH VALUE IS	0.38029	ON 11041824: AT (	379245.00, 3773644.00, 109.00, 494.50, 12.50)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
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*** 05/12/18
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A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified (1.83 Percent)

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

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ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
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MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

[illegible]

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
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10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
10 01 01 01 17.7 0 -999. -99.00 284.9 99.0 -99.00 -99.00
10 01 01 01 21.3 1 38. 3.10 -999.0 99.0 -99.00 -99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western *** 05/12/18
*** AERMET - VERSION 16216 *** *** Particulates (PM2.5) / Average Speed Scenario *** 10:48:44
PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 24-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
ALL HIGH 1ST HIGH VALUE IS	0.30110	ON 11041824: AT (	379245.00, 3773644.00, 109.00, 494.50, 18.60)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western *** 05/12/18
*** AERMET - VERSION 16216 *** *** Particulates (PM2.5) / Average Speed Scenario *** 10:48:44
PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 808 Informational Message(s)
A Total of 43824 Hours Were Processed
A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME W187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
MX W450 17521 CHKDAT: Record out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record out of Sequence in Meteorological File at: 2 year gap

*** MODELOPTs: ReqDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT 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.

```

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      64 Source(s),
for Total of      1 Urban Area(s):
```

****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* BETA option for SBL in AERMET

TEMP_Sub - Meteorological data includes TEMP substitutions

****Model Accepts FLAGPOLE Receptor Heights.**

**The User Specified a Pollutant Type of: OTHER

**Model Calculates 1 Short Term Average(s) of: 1-HR

****This Run Includes:** 64 Source(s); 1 Source Group(s); and 90 Receptor(s)

```

with:      0 POINT(s), including
           0 POINTCAP(s) and      0 POINTHOR(s)
and:      64 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.**

**The AERMET Input Meteorological Data Version Date: 16216

```

**Output Options Selected:

```

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	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) = 87.00 ; 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 = 3.5 MB of RAM.**

```
**Input Runstream File:      SW_TOG_GASOLINE_1_FIRST.DTA
**Output Print File:        SW_TOG_GASOLINE_1_FIRST.LST
```

**File for Summary of Results: D:\WD Passport\sunset western\model2\SW_TOG_GASOLINE_1_FIRST.SUM

```
*** MODELOPTs:  ReqDFault  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*
```

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

[illegible]

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)

*** MODELOPTs: ReaDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

```
Surface file:      CELA_v9.SFC
Profile file:      CELA_v9.PFL
Surface format:    FREE
Profile format:    FREE
Surface station no.: 99999
Name: UNKNOWN
Year: 2010
```

Met Version: 16216

```
Upper air station no.: 3190
Name: UNKNOWN
Year: 2010
```

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
				02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
				03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
				04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
				05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
				06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
				07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
				08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
				09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
				10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
				11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
				12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
				13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
				14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
				15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
				16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
				17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
				18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
				19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
				20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
				21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
				22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
				23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
				24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Minimum Speed Scenario

*** 05/12/18
*** 11:00:20
PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT 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
ALL HIGH 1ST HIGH VALUE IS	0.26442	ON 10100517: AT (	379245.00, 3773644.00, 109.00, 494.50,	0.00)	DC

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Minimum Speed Scenario

*** 05/12/18
*** 11:00:20
PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of	0 Fatal Error Message(s)
A Total of	4 Warning Message(s)
A Total of	808 Informational Message(s)
A Total of	43824 Hours Were Processed
A Total of	4 Calm Hours Identified
A Total of	804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME W186 251 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap


```
Upper air station no.: 3190
Name: UNKNOWN
Year: 2010
```

First 24 hours of scalar data																						
YR	MO	DY	JDY	HR	HO	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	ZO	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaw	sigmav
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario

*** 05/12/18
 *** 11:09:06
 *** PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT 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
ALL	HIGH	1ST HIGH VALUE IS	0.05457m ON 10060524: AT (	379245.00, 3773644.00, 109.00, 494.50,	9.40)	DC

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario

*** 05/12/18
 *** 11:09:06
 *** PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
 A Total of 4 Warning Message(s)
 A Total of 808 Informational Message(s)
 A Total of 43824 Hours Were Processed
 A Total of 4 Calm Hours Identified
 A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
 ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
 ME W187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

*** MODELOPTs: ReqDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT 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      64 Source(s),
for Total of      1 Urban Area(s):
```

****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* BETA option for SBL in AERMET

TEMP_Sub - Meteorological data includes TEMP substitutions

****Model Accepts FLAGPOLE Receptor Heights.**

**The User Specified a Pollutant Type of: OTHER

**Model Calculates 1 Short Term Average(s) of: 1-HR

****This Run Includes:** 64 Source(s); 1 Source Group(s); and 90 Receptor(s)

```

with:      0 POINT(s), including
           0 POINTCAP(s) and      0 POINTHOR(s)
and:      64 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.**

**The AERMET Input Meteorological Data Version Date: 16216

****Output Options Selected:**

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	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) = 87.00 ; 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 = 3.5 MB of RAM.

```
**Input Runstream File:      SW_TOG_DIESEL_1_FIRST.DTA
**Output Print File:        SW_TOG_DIESEL_1_FIRST.LST
```

**File for Summary of Results: D:\WD Passport\sunset western\model2\SW_TOG_DIESEL_1_FIRST.SUM

*** MODELOPTs: ReqDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

[illegible]

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)

ALRMET VERSION 10210 Total Organic Gases (PRESCT) / Minimum Speed Section 10

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

```
Surface file:      CELA_v9.SFC
Profile file:      CELA_v9.PFL
Surface format:    FREE
Profile format:    FREE
Surface station no.: 99999
Name: UNKNOWN
Year: 2010
```

```
Upper air station no.: 3190
Name: UNKNOWN
Year: 2010
```

Met Version: 16216

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7	
				02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7	
				03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7	
				04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7	
				05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7	
				06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7	
				07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7	
				08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7	
				09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7	
				10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7	
				11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7	
				12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7	
				13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7	
				14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7	
				15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7	
				16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7	
				17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7	
				18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7	
				19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7	
				20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7	
				21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7	
				22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7	
				23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7	
				24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7	

First hour of profile data

```

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
10 01 01 01 17.7 0 -999. -99.00 284.9 99.0 -99.00 -99.00
10 01 01 01 21.3 1 38. 3.10 -999.0 99.0 -99.00 -99.00

```

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

```

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Total Organic Gases (Diesel) / Minimum Speed Scenario

```

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*** MODELOPTS: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT 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
ALL HIGH 1ST HIGH VALUE IS	0.04862	ON 10100517: AT (	379245.00, 3773644.00, 109.00, 494.50,	0.00)	DC

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

```

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Total Organic Gases (Diesel) / Minimum Speed Scenario

```

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*** MODELOPTS: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

```

A Total of 0 Fatal Error Message(s)
A Total of 4 warning Message(s)
A Total of 808 Informational Message(s)

A Total of 43824 Hours Were Processed
A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified ( 1.83 Percent)

```

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

```

***** WARNING MESSAGES *****
ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME W187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

```

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```

***      MODEL SETUP OPTIONS SUMMARY      ***

```

-- DEPOSITION LOGIC --

DEPOSITION LOGS
 **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 64 Source(s),
for Total of 1 Urban Area(s):

****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* BETA option for SBL in AERMET

TEMP_Sub - Meteorological data includes TEMP substitutions

****Model Accepts FLAGPOLE Receptor Heights.**

**The User Specified a Pollutant Type of: OTHER

**Model Calculates 1 Short Term Average(s) of: 8-HR

****This Run Includes:** 64 Source(s); 1 Source Group(s); and 90 Receptor(s)

```

with:      0 POINT(s), including
           0 POINTCAP(s) and      0 POINTHOR(s)
and:      64 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.**

**The AERMET Input Meteorological Data Version Date: 16216

```

**Output Options Selected:

```

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	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) =    87.00 ;  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 = 3.5 MB of RAM.

```
**Input Runstream File:      SW_TOG_DIESEL_8_THIRD.DTA
**Output Print File:        SW_TOG_DIESEL_8_THIRD.LST
```

**File for Summary of Results: D:\WD Passport\sunset western\model2\SW_TOG_DIESEL_8_THIRD.SUM

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```
*** MODELOPTs:      ReqDFault  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*
```

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

[illegible]

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)

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```
*** MODELOPTs:  ReqDEFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*
```

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

```
Surface file: CELA_v9.SFC
Profile file: CELA_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 99999
Name: UNKNOWN
Year: 2010
```

```
Upper air station no.: 3190
Name: UNKNOWN
Year: 2010
```

Met Version: 16216

First 24 hours of scalar data																						
YR	MO	DY	JDY	HR	HO	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	ZO	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
			1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
			1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
			1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
			1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
			1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
			1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
			1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
			1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
			1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
			1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
			1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
			1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
			1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
			1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
			1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
			1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
			1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
			1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
			1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
			1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
			1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
			1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
			1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Total Organic Gases (Diesel) / Average Speed Scenario

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*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT 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
ALL HIGH 1ST HIGH VALUE IS	0.00522m ON	10060524: AT (	379245.00, 3773644.00, 109.00, 494.50,	9.40)	DC

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Total Organic Gases (Diesel) / Average Speed Scenario

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*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of	0 Fatal Error Message(s)
A Total of	4 Warning Message(s)
A Total of	808 Informational Message(s)
A Total of	43824 Hours were Processed
A Total of	4 Calm Hours Identified
A Total of	804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME W187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

[illegible]

First 24 hours of scalar data				W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT		
YR	MO	DY	JDY HR	HO	U*													
10	01	01	1 01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7
10	01	01	1 02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7
10	01	01	1 03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7
10	01	01	1 04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7
10	01	01	1 05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7
10	01	01	1 06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7
10	01	01	1 07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7
10	01	01	1 08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7
10	01	01	1 09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7
10	01	01	1 10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7
10	01	01	1 11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7
10	01	01	1 12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7
10	01	01	1 13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7
10	01	01	1 14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7
10	01	01	1 15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7
10	01	01	1 16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7
10	01	01	1 17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7
10	01	01	1 18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7
10	01	01	1 19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7
10	01	01	1 20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7
10	01	01	1 21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7
10	01	01	1 22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7
10	01	01	1 23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7
10	01	01	1 24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7

First hour of profile data

YR	MO	DY	HR	HEIGHT F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario

*** 05/12/18
 *** 11:38:11
 *** PAGE 4

*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.02454 AT (379245.00, 3773644.00, 109.00, 494.50, 6.40)	DC	
	2ND HIGHEST VALUE IS	0.02321 AT (379263.00, 3773644.00, 109.00, 494.50, 6.40)	DC	
	3RD HIGHEST VALUE IS	0.02272 AT (379245.00, 3773662.00, 109.00, 494.50, 6.40)	DC	
	4TH HIGHEST VALUE IS	0.02194 AT (379281.00, 3773644.00, 109.00, 494.50, 6.40)	DC	
	5TH HIGHEST VALUE IS	0.02156 AT (379263.00, 3773662.00, 109.00, 494.50, 6.40)	DC	
	6TH HIGHEST VALUE IS	0.02105 AT (379245.00, 3773680.00, 109.00, 494.50, 6.40)	DC	
	7TH HIGHEST VALUE IS	0.02072 AT (379299.00, 3773644.00, 109.00, 494.50, 6.40)	DC	
	8TH HIGHEST VALUE IS	0.02045 AT (379281.00, 3773662.00, 109.00, 494.50, 6.40)	DC	
	9TH HIGHEST VALUE IS	0.02004 AT (379263.00, 3773680.00, 109.00, 494.50, 6.40)	DC	
	10TH HIGHEST VALUE IS	0.01957 AT (379317.00, 3773644.00, 109.00, 494.50, 6.40)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario

*** 05/12/18
 *** 11:38:11
 *** PAGE 5

*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
 A Total of 4 Warning Message(s)
 A Total of 808 Informational Message(s)
 A Total of 43824 Hours Were Processed
 A Total of 4 Calm Hours Identified
 A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
 ME w186 251 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
 ME w187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
 MX w450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
 MX w450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

[illegible]

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario

*** 05/12/18
 11:45:51
 PAGE 4

*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.02302 AT (379245.00, 3773644.00, 109.00, 494.50, 9.40)	DC	
	2ND HIGHEST VALUE IS	0.02183 AT (379263.00, 3773644.00, 109.00, 494.50, 9.40)	DC	
	3RD HIGHEST VALUE IS	0.02137 AT (379245.00, 3773662.00, 109.00, 494.50, 9.40)	DC	
	4TH HIGHEST VALUE IS	0.02068 AT (379281.00, 3773644.00, 109.00, 494.50, 9.40)	DC	
	5TH HIGHEST VALUE IS	0.02033 AT (379263.00, 3773662.00, 109.00, 494.50, 9.40)	DC	
	6TH HIGHEST VALUE IS	0.01984 AT (379245.00, 3773680.00, 109.00, 494.50, 9.40)	DC	
	7TH HIGHEST VALUE IS	0.01958 AT (379299.00, 3773644.00, 109.00, 494.50, 9.40)	DC	
	8TH HIGHEST VALUE IS	0.01932 AT (379281.00, 3773662.00, 109.00, 494.50, 9.40)	DC	
	9TH HIGHEST VALUE IS	0.01894 AT (379263.00, 3773680.00, 109.00, 494.50, 9.40)	DC	
	10TH HIGHEST VALUE IS	0.01853 AT (379317.00, 3773644.00, 109.00, 494.50, 9.40)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario

*** 05/12/18
 11:45:51
 PAGE 5

*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
 A Total of 4 Warning Message(s)
 A Total of 808 Informational Message(s)
 A Total of 43824 Hours Were Processed
 A Total of 4 Calm Hours Identified
 A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
 ME W186 251 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
 ME W187 251 MEOPEN: ADJ_U* Option for Low Winds used in AERMET
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

```
*** MODELOPTs:  ReqDFault  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ  U*
```

```

***      MODEL SETUP OPTIONS SUMMARY      ***

```

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

-- DEPOSITION LOGIC --

DEPOSITION LOGIC
 **NO GAS DEPOSITION Data Provided.

**NO PARTICLE 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 64 Source(s),
for Total of 1 Urban Area(s):

****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* BETA option for SBL in AERMET

TEMP_Sub - Meteorological data includes TEMP substitutions

****Model Accepts FLAGPOLE Receptor Heights.**

**The User Specified a Pollutant Type of: OTHER

**Model calculates ANNUAL Averages Only

**This Run Includes: 64 Source(s): 1 Source Group(s): and 90 Receptor(s)

```

with:      0 POINT(s), including
           0 POINTCAP(s) and      0 POINTHOR(s)
and:      64 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.**

**The AERMET Input Meteorological Data Version Date: 16216

****Output Options Selected:**

Model Outputs Tables of ANNUAL Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

****NOTE:** The Following Flags May Appear Following CONC Values:

c	for	Calm Hours
m	for	Missing Hours
b	for	Both Calm and Missing Hours

```
**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) = 87.00 ; 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 = 3.5 MB of RAM.

```
**Input Runstream File:      SW_TOG_GASOLINE_CHRONIC_FOURTH.DTA
**Output Print File:        SW_TOG_GASOLINE_CHRONIC_FOURTH.LST
```

**File for Summary of Results: D:\WD Passport\sunset western\model2\SW_TOG_GASOLINE_CHRONIC_FOURTH.SUM

*** MODELOPTs: ReqDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

[illegible]

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)

AERMET VERSION 10210 Total Organic Gases (Gasoline) / Average Speed

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

```
Surface file: CELA_v9.SFC
Profile file: CELA_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 99999
Name: UNKNOWN
Year: 2010
```

Met Version: 16216

```
Upper air station no.: 3190
Name: UNKNOWN
Year: 2010
```

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
			1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
			1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
			1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
			1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
			1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
			1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
			1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
			1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
			1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
			1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
			1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
			1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
			1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
			1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
			1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
			1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
			1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
			1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
			1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
			1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
			1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
			1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
			1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
10 01 01 01 17.7 0 -999. -99.00 284.9 99.0 -99.00 -99.00
10 01 01 01 21.3 1 38. 3.10 -999.0 99.0 -99.00 -99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario

*** 05/12/18
11:54:44
PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.02081 AT (379245.00, 3773644.00, 109.00, 494.50, 12.50)	DC	
	2ND HIGHEST VALUE IS	0.01981 AT (379263.00, 3773644.00, 109.00, 494.50, 12.50)	DC	
	3RD HIGHEST VALUE IS	0.01940 AT (379245.00, 3773662.00, 109.00, 494.50, 12.50)	DC	
	4TH HIGHEST VALUE IS	0.01883 AT (379281.00, 3773644.00, 109.00, 494.50, 12.50)	DC	
	5TH HIGHEST VALUE IS	0.01851 AT (379263.00, 3773662.00, 109.00, 494.50, 12.50)	DC	
	6TH HIGHEST VALUE IS	0.01808 AT (379245.00, 3773680.00, 109.00, 494.50, 12.50)	DC	
	7TH HIGHEST VALUE IS	0.01788 AT (379299.00, 3773644.00, 109.00, 494.50, 12.50)	DC	
	8TH HIGHEST VALUE IS	0.01764 AT (379281.00, 3773662.00, 109.00, 494.50, 12.50)	DC	
	9TH HIGHEST VALUE IS	0.01730 AT (379263.00, 3773680.00, 109.00, 494.50, 12.50)	DC	
	10TH HIGHEST VALUE IS	0.01697 AT (379317.00, 3773644.00, 109.00, 494.50, 12.50)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario

*** 05/12/18
11:54:44
PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 808 Informational Message(s)
A Total of 43824 Hours Were Processed
A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME w186 251 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME w187 251 MEOPEN: ADJ_U* Option for Low Winds used in AERMET
MX w450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX w450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

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Upper air station no.: 3190
Name: UNKNOWN
Year: 2010
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First 24 hours of scalar data				W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	ZO	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT		
YR	MO	DY	JDY HR	H0	U*													
10	01	01	1 01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7
10	01	01	1 02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7
10	01	01	1 03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7
10	01	01	1 04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7
10	01	01	1 05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7
10	01	01	1 06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7
10	01	01	1 07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7
10	01	01	1 08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7
10	01	01	1 09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7
10	01	01	1 10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7
10	01	01	1 11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7
10	01	01	1 12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7
10	01	01	1 13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7
10	01	01	1 14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7
10	01	01	1 15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7
10	01	01	1 16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7
10	01	01	1 17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7
10	01	01	1 18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7
10	01	01	1 19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7
10	01	01	1 20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7
10	01	01	1 21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7
10	01	01	1 22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7
10	01	01	1 23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7
10	01	01	1 24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaw	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario

*** 05/12/18
 12:02:34
 PAGE 4

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.01831 AT (379245.00, 3773644.00, 109.00, 494.50, 15.50)	DC	
	2ND HIGHEST VALUE IS	0.01750 AT (379263.00, 3773644.00, 109.00, 494.50, 15.50)	DC	
	3RD HIGHEST VALUE IS	0.01715 AT (379245.00, 3773662.00, 109.00, 494.50, 15.50)	DC	
	4TH HIGHEST VALUE IS	0.01671 AT (379281.00, 3773644.00, 109.00, 494.50, 15.50)	DC	
	5TH HIGHEST VALUE IS	0.01644 AT (379263.00, 3773662.00, 109.00, 494.50, 15.50)	DC	
	6TH HIGHEST VALUE IS	0.01607 AT (379245.00, 3773680.00, 109.00, 494.50, 15.50)	DC	
	7TH HIGHEST VALUE IS	0.01593 AT (379299.00, 3773644.00, 109.00, 494.50, 15.50)	DC	
	8TH HIGHEST VALUE IS	0.01573 AT (379281.00, 3773662.00, 109.00, 494.50, 15.50)	DC	
	9TH HIGHEST VALUE IS	0.01544 AT (379263.00, 3773680.00, 109.00, 494.50, 15.50)	DC	
	10TH HIGHEST VALUE IS	0.01518 AT (379317.00, 3773644.00, 109.00, 494.50, 15.50)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario

*** 05/12/18
 12:02:34
 PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
 A Total of 4 warning Message(s)
 A Total of 808 Informational Message(s)
 A Total of 43824 Hours Were Processed
 A Total of 4 Calm Hours Identified
 A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****

ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
 ME W187 251 MEOPEN: ADJ_U* Option for Low Winds used in AERMET
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
10 01 01 01 17.7 0 -999. -99.00 284.9 99.0 -99.00 -99.00
10 01 01 01 21.3 1 38. 3.10 -999.0 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 16216r *** *** Sunset/Western ***
*** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario ***
*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*
*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***
** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.01552 AT (379245.00, 3773644.00, 109.00, 494.50, 18.60)	DC	
	2ND HIGHEST VALUE IS	0.01491 AT (379263.00, 3773644.00, 109.00, 494.50, 18.60)	DC	
	3RD HIGHEST VALUE IS	0.01464 AT (379245.00, 3773662.00, 109.00, 494.50, 18.60)	DC	
	4TH HIGHEST VALUE IS	0.01430 AT (379281.00, 3773644.00, 109.00, 494.50, 18.60)	DC	
	5TH HIGHEST VALUE IS	0.01409 AT (379263.00, 3773662.00, 109.00, 494.50, 18.60)	DC	
	6TH HIGHEST VALUE IS	0.01381 AT (379245.00, 3773680.00, 109.00, 494.50, 18.60)	DC	
	7TH HIGHEST VALUE IS	0.01369 AT (379299.00, 3773644.00, 109.00, 494.50, 18.60)	DC	
	8TH HIGHEST VALUE IS	0.01353 AT (379281.00, 3773662.00, 109.00, 494.50, 18.60)	DC	
	9TH HIGHEST VALUE IS	0.01331 AT (379263.00, 3773680.00, 109.00, 494.50, 18.60)	DC	
	10TH HIGHEST VALUE IS	0.01310 AT (379317.00, 3773644.00, 109.00, 494.50, 18.60)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
*** AERMOD - VERSION 16216r *** *** Sunset/Western ***
*** AERMET - VERSION 16216 *** *** Total Organic Gases (Gasoline) / Average Speed Scenario ***
*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*
*** Message Summary : AERMOD Model Execution ***
----- Summary of Total Messages -----
A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 808 Informational Message(s)
A Total of 43824 Hours Were Processed
A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME W187 251 MEOPEN: ADJ_U* Option For Low Winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

[illegible]

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	
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7				
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7				
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7				
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7				
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7				
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7				
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7				
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7				
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7				
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7				
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7				
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7				
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7				
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7				
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7				
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7				
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7				
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7				
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7				
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7				
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7				
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7				
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7				
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7				

First hour of profile data

YR	MO	DY	HR	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Particulates (Diesel) / Average Speed Scenario

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*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00455 AT (379245.00, 3773644.00, 109.00, 494.50, 6.40)	DC	
	2ND HIGHEST VALUE IS	0.00430 AT (379263.00, 3773644.00, 109.00, 494.50, 6.40)	DC	
	3RD HIGHEST VALUE IS	0.00421 AT (379245.00, 3773662.00, 109.00, 494.50, 6.40)	DC	
	4TH HIGHEST VALUE IS	0.00406 AT (379281.00, 3773644.00, 109.00, 494.50, 6.40)	DC	
	5TH HIGHEST VALUE IS	0.00399 AT (379263.00, 3773662.00, 109.00, 494.50, 6.40)	DC	
	6TH HIGHEST VALUE IS	0.00391 AT (379245.00, 3773680.00, 109.00, 494.50, 6.40)	DC	
	7TH HIGHEST VALUE IS	0.00383 AT (379299.00, 3773644.00, 109.00, 494.50, 6.40)	DC	
	8TH HIGHEST VALUE IS	0.00378 AT (379281.00, 3773662.00, 109.00, 494.50, 6.40)	DC	
	9TH HIGHEST VALUE IS	0.00372 AT (379263.00, 3773680.00, 109.00, 494.50, 6.40)	DC	
	10TH HIGHEST VALUE IS	0.00362 AT (379245.00, 3773698.00, 109.00, 494.50, 6.40)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Particulates (Diesel) / Average Speed Scenario

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*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of	0 Fatal Error Message(s)
A Total of	4 Warning Message(s)
A Total of	808 Informational Message(s)
A Total of	43824 Hours Were Processed
A Total of	4 Calm Hours Identified
A Total of	804 Missing Hours Identified (1.83 Percent)

***** FATAL ERROR MESSAGES *****

*** NONE ***

***** WARNING MESSAGES *****

ME w186	251	MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used	0.50
ME w187	251	MEOPEN: ADJ_U* Option for Low Winds used in AERMET	
MX w450	17521	CHKDAT: Record Out of Sequence in Meteorological File at:	14010101
MX w450	17521	CHKDAT: Record Out of Sequence in Meteorological File at:	2 year gap

[illegible]

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Particulates (Diesel) / Average Speed Scenario

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12:52:02
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*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00427 AT (379245.00, 3773644.00, 109.00, 494.50, 9.40)	DC	
	2ND HIGHEST VALUE IS	0.00404 AT (379263.00, 3773644.00, 109.00, 494.50, 9.40)	DC	
	3RD HIGHEST VALUE IS	0.00396 AT (379245.00, 3773662.00, 109.00, 494.50, 9.40)	DC	
	4TH HIGHEST VALUE IS	0.00383 AT (379281.00, 3773644.00, 109.00, 494.50, 9.40)	DC	
	5TH HIGHEST VALUE IS	0.00377 AT (379263.00, 3773662.00, 109.00, 494.50, 9.40)	DC	
	6TH HIGHEST VALUE IS	0.00368 AT (379245.00, 3773680.00, 109.00, 494.50, 9.40)	DC	
	7TH HIGHEST VALUE IS	0.00362 AT (379299.00, 3773644.00, 109.00, 494.50, 9.40)	DC	
	8TH HIGHEST VALUE IS	0.00358 AT (379281.00, 3773662.00, 109.00, 494.50, 9.40)	DC	
	9TH HIGHEST VALUE IS	0.00351 AT (379263.00, 3773680.00, 109.00, 494.50, 9.40)	DC	
	10TH HIGHEST VALUE IS	0.00343 AT (379317.00, 3773644.00, 109.00, 494.50, 9.40)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Particulates (Diesel) / Average Speed Scenario

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*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 808 Informational Message(s)
A Total of 43824 Hours Were Processed
A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME w186 251 MEOPEN: THRESH_IMIN 1-min ASOS wind speed threshold used 0.50
ME w187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
MX w450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX w450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

[illegible]

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Particulates (Diesel) / Average Speed Scenario

*** 05/12/18
 13:02:56
 PAGE 4

*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00386 AT (379245.00, 3773644.00, 109.00, 494.50, 12.50)	DC	
	2ND HIGHEST VALUE IS	0.00367 AT (379263.00, 3773644.00, 109.00, 494.50, 12.50)	DC	
	3RD HIGHEST VALUE IS	0.00360 AT (379245.00, 3773662.00, 109.00, 494.50, 12.50)	DC	
	4TH HIGHEST VALUE IS	0.00349 AT (379281.00, 3773644.00, 109.00, 494.50, 12.50)	DC	
	5TH HIGHEST VALUE IS	0.00343 AT (379263.00, 3773662.00, 109.00, 494.50, 12.50)	DC	
	6TH HIGHEST VALUE IS	0.00335 AT (379245.00, 3773680.00, 109.00, 494.50, 12.50)	DC	
	7TH HIGHEST VALUE IS	0.00331 AT (379299.00, 3773644.00, 109.00, 494.50, 12.50)	DC	
	8TH HIGHEST VALUE IS	0.00327 AT (379281.00, 3773662.00, 109.00, 494.50, 12.50)	DC	
	9TH HIGHEST VALUE IS	0.00321 AT (379263.00, 3773680.00, 109.00, 494.50, 12.50)	DC	
	10TH HIGHEST VALUE IS	0.00315 AT (379317.00, 3773644.00, 109.00, 494.50, 12.50)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
 *** AERMET - VERSION 16216 *** *** Particulates (Diesel) / Average Speed Scenario

*** 05/12/18
 13:02:56
 PAGE 5

*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
 A Total of 4 Warning Message(s)
 A Total of 808 Informational Message(s)
 A Total of 43824 Hours Were Processed
 A Total of 4 Calm Hours Identified
 A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
 ME W186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
 ME W187 251 MEOPEN: ADJ_U* Option for Low Winds used in AERMET
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

[illegible]

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
10	01	01	1	02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
10	01	01	1	03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
10	01	01	1	04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
10	01	01	1	05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
10	01	01	1	06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
10	01	01	1	07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
10	01	01	1	08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
10	01	01	1	09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
10	01	01	1	10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
10	01	01	1	11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
10	01	01	1	12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
10	01	01	1	13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
10	01	01	1	14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
10	01	01	1	15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
10	01	01	1	16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
10	01	01	1	17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
10	01	01	1	18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
10	01	01	1	19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
10	01	01	1	20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
10	01	01	1	21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
10	01	01	1	22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
10	01	01	1	23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
10	01	01	1	24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
10 01 01 01 17.7 0 -999. -99.00 284.9 99.0 -99.00 -99.00
10 01 01 01 21.3 1 38. 3.10 -999.0 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 16216r *** *** Sunset/Western ***
*** AERMET - VERSION 16216 *** *** Particulates (Diesel) / Average Speed Scenario ***
*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*
*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***
*** CONC OF OTHER IN MICROGRAMS/M**3 ***

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00339 AT (379245.00, 3773644.00, 109.00, 494.50, 15.50)	DC	
	2ND HIGHEST VALUE IS	0.00324 AT (379263.00, 3773644.00, 109.00, 494.50, 15.50)	DC	
	3RD HIGHEST VALUE IS	0.00318 AT (379245.00, 3773662.00, 109.00, 494.50, 15.50)	DC	
	4TH HIGHEST VALUE IS	0.00310 AT (379281.00, 3773644.00, 109.00, 494.50, 15.50)	DC	
	5TH HIGHEST VALUE IS	0.00305 AT (379263.00, 3773662.00, 109.00, 494.50, 15.50)	DC	
	6TH HIGHEST VALUE IS	0.00298 AT (379245.00, 3773680.00, 109.00, 494.50, 15.50)	DC	
	7TH HIGHEST VALUE IS	0.00295 AT (379299.00, 3773644.00, 109.00, 494.50, 15.50)	DC	
	8TH HIGHEST VALUE IS	0.00292 AT (379281.00, 3773662.00, 109.00, 494.50, 15.50)	DC	
	9TH HIGHEST VALUE IS	0.00286 AT (379263.00, 3773680.00, 109.00, 494.50, 15.50)	DC	
	10TH HIGHEST VALUE IS	0.00282 AT (379317.00, 3773644.00, 109.00, 494.50, 15.50)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
*** AERMOD - VERSION 16216r *** *** Sunset/Western ***
*** AERMET - VERSION 16216 *** *** Particulates (Diesel) / Average Speed Scenario ***
*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*
*** Message Summary : AERMOD Model Execution ***
----- Summary of Total Messages -----
A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 808 Informational Message(s)
A Total of 43824 Hours Were Processed
A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME w186 251 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME w187 251 MEOPEN: ADJ_U* Option for Low Winds used in AERMET
MX w450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX w450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

[illegible]

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
10	01	01	1	01	-33.0	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	38.	21.3	284.9	17.7			
				02	-26.9	0.285	-9.000	-9.000	-999.	367.	89.6	0.56	0.86	1.00	2.70	38.	21.3	284.2	17.7			
				03	-38.6	0.387	-9.000	-9.000	-999.	577.	164.6	0.56	0.86	1.00	3.60	35.	21.3	284.2	17.7			
				04	-33.0	0.331	-9.000	-9.000	-999.	458.	120.2	0.56	0.86	1.00	3.10	34.	21.3	283.8	17.7			
				05	-33.1	0.331	-9.000	-9.000	-999.	456.	120.2	0.56	0.86	1.00	3.10	37.	21.3	283.1	17.7			
				06	-38.7	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	24.	21.3	283.1	17.7			
				07	-38.6	0.387	-9.000	-9.000	-999.	577.	164.5	0.56	0.86	1.00	3.60	35.	21.3	283.8	17.7			
				08	-29.6	0.435	-9.000	-9.000	-999.	688.	251.8	0.56	0.86	0.55	4.00	35.	21.3	283.8	17.7			
				09	30.0	0.426	0.367	0.008	59.	666.	-232.0	0.56	0.86	0.32	3.60	38.	21.3	286.4	17.7			
				10	72.3	0.359	0.629	0.008	124.	519.	-57.8	0.56	0.86	0.24	2.70	34.	21.3	290.4	17.7			
				11	104.4	0.321	0.998	0.008	344.	437.	-28.6	0.56	0.86	0.21	2.20	43.	21.3	292.5	17.7			
				12	115.1	0.283	1.156	0.008	484.	363.	-17.9	0.56	0.86	0.20	1.80	62.	21.3	295.9	17.7			
				13	91.4	0.406	1.130	0.008	568.	622.	-66.2	0.56	0.86	0.20	3.10	263.	21.3	294.2	17.7			
				14	89.3	0.316	1.168	0.008	642.	432.	-31.9	0.56	0.86	0.21	2.20	259.	21.3	294.9	17.7			
				15	42.6	0.295	0.928	0.008	675.	384.	-54.0	0.56	0.86	0.25	2.20	267.	21.3	294.9	17.7			
				16	12.0	0.359	0.609	0.008	680.	516.	-347.9	0.56	0.86	0.33	3.10	264.	21.3	292.5	17.7			
				17	-15.7	0.231	-9.000	-9.000	-999.	276.	70.7	0.56	0.86	0.60	2.20	288.	21.3	290.9	17.7			
				18	-6.1	0.135	-9.000	-9.000	-999.	124.	36.7	0.56	0.86	1.00	1.30	344.	21.3	289.2	17.7			
				19	-11.4	0.184	-9.000	-9.000	-999.	190.	49.2	0.56	0.86	1.00	1.80	2.	21.3	288.8	17.7			
				20	-17.4	0.229	-9.000	-9.000	-999.	263.	62.1	0.56	0.86	1.00	2.20	22.	21.3	288.1	17.7			
				21	-17.4	0.229	-9.000	-9.000	-999.	263.	61.9	0.56	0.86	1.00	2.20	40.	21.3	287.0	17.7			
				22	-11.5	0.184	-9.000	-9.000	-999.	190.	49.1	0.56	0.86	1.00	1.80	306.	21.3	287.0	17.7			
				23	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	45.	21.3	286.4	17.7			
				24	-11.5	0.184	-9.000	-9.000	-999.	190.	49.0	0.56	0.86	1.00	1.80	67.	21.3	286.4	17.7			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	17.7	0	-999.	-99.00	284.9	99.0	-99.00	-99.00
10	01	01	01	21.3	1	38.	3.10	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Particulates (Diesel) / Average Speed Scenario

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*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00287 AT (379245.00, 3773644.00, 109.00, 494.50, 18.60)	DC	
	2ND HIGHEST VALUE IS	0.00276 AT (379263.00, 3773644.00, 109.00, 494.50, 18.60)	DC	
	3RD HIGHEST VALUE IS	0.00271 AT (379245.00, 3773662.00, 109.00, 494.50, 18.60)	DC	
	4TH HIGHEST VALUE IS	0.00265 AT (379281.00, 3773644.00, 109.00, 494.50, 18.60)	DC	
	5TH HIGHEST VALUE IS	0.00261 AT (379263.00, 3773662.00, 109.00, 494.50, 18.60)	DC	
	6TH HIGHEST VALUE IS	0.00255 AT (379245.00, 3773680.00, 109.00, 494.50, 18.60)	DC	
	7TH HIGHEST VALUE IS	0.00254 AT (379299.00, 3773644.00, 109.00, 494.50, 18.60)	DC	
	8TH HIGHEST VALUE IS	0.00251 AT (379281.00, 3773662.00, 109.00, 494.50, 18.60)	DC	
	9TH HIGHEST VALUE IS	0.00246 AT (379263.00, 3773680.00, 109.00, 494.50, 18.60)	DC	
	10TH HIGHEST VALUE IS	0.00243 AT (379317.00, 3773644.00, 109.00, 494.50, 18.60)	DC	

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

*** AERMOD - VERSION 16216r *** *** Sunset/Western
*** AERMET - VERSION 16216 *** *** Particulates (Diesel) / Average Speed Scenario

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*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 808 Informational Message(s)
A Total of 43824 Hours Were Processed
A Total of 4 Calm Hours Identified
A Total of 804 Missing Hours Identified (1.83 Percent)

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

***** WARNING MESSAGES *****
ME w186 251 MEOPEN: THRESH_LMIN 1-min ASOS wind speed threshold used 0.50
ME w187 251 MEOPEN: ADJ_U* Option for Low winds used in AERMET
MX w450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX w450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap