Temescal Valley Business Park (PAR190052)

MOBILE SOURCE HEALTH RISK ASSESSMENT

COUNTY OF RIVERSIDE

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LIST OF ABBREVIATED TERMS

(1)	Reference
µg	Microgram
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
APS	Auxiliary Power System
AQMD	Air Quality Management District
ARB	Air Resources Board
CEQA	California Environmental Quality Act
CPF	Cancer Potency Factor
DPM	Diesel Particulate Matter
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
HHD	Heavy Heavy-Duty
HI	Hazard Index
HRA	Health Risk Assessment
LHD	Light Heavy-Duty
MATES	Multiple Air Toxics Exposure Study
MEIR	Maximally Exposed Individual Receptor
MEISC	Maximally Exposed Individual School Child
MEIW	Maximally Exposed Individual Worker
MHD	Medium Heavy-Duty
NAD	North American Datum
OEHHA	Office of Environmental Health Hazard Assessment
PCE	Passenger Car Equivalent
PM10	Particulate Matter 10 microns in diameter or less
Project	Temescal Valley Business Park (PAR190052)
REL	Reference Exposure Level
RM	Recommended Measures
SCAQMD	South Coast Air Quality Management District
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TIA	Traffic Impact Analysis
URF	Unit Risk Factor
UTM	Universal Transverse Mercator
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

This report evaluates the potential mobile source health risk impacts to sensitive receptors (residents) and adjacent workers associated with the development of the Project, more specifically, health risk impacts as a result of exposure to diesel particulate matter (DPM) as a result of heavy-duty diesel trucks accessing the site. This section summarizes the significance criteria and Project mobile source health risks.

The results of the health risk assessment of lifetime cancer risk from Project-generated DPM emissions are provided in Table ES-1.

OPERATIONAL IMPACTS

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project DPM source emissions is Location R2, which represents the existing residence on Lawson Road, approximately 1,317 feet west of the Project site. R2 is placed at the private outdoor living area (backyard) facing the Project site. At the maximally exposed individual receptor (MEIR), the maximum incremental cancer risk attributable to Project DPM source emissions is estimated at 0.02 in one million, which is less than the South Coast Air Quality Management District's (SCAQMD's) significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be 0.000008, which would not exceed the applicable significance threshold of 1.0. Because all other modeled residential receptors are exposed to lesser concentrations and are located at a greater distance than the MEIR analyzed herein, and DPM generally dissipates with distance from the source, all other residential receptors in the vicinity of the Project site would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby residences.

Worker Exposure Scenario:

The worker receptor land use with the greatest potential exposure to Project DPM source emissions is Location R6, which represents GM & J Laser Cutting, Inc. located at 23191 Temescal Canyon Road, approximately 195 feet west of the Project site. R6 is placed at the building façade where a worker could remain for a typical workday. At the maximally exposed individual worker (MEIW), the maximum incremental cancer risk impact is 0.02 in one million which is less than the SCAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be 0.00007, which would not exceed the applicable significance threshold of 1.0. Because all other modeled worker receptors are located at a greater distance than the MEIW analyze herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent workers.

School Child Exposure Scenario:

There are no schools located within a ¼ mile of the Project site. As such, there would be no significant impacts that would occur to any schools in the vicinity of the Project. Proximity to sources of toxics is critical to determining the impact. In traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70-percent drop-off in particulate pollution levels at 500 feet. Based on CARB and SCAQMD emissions and modeling analyses, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from a distribution center (1). As such, the Project will not cause a significant human health or cancer risk to nearby school children.

TABLE ES-1: SUMMARY OF CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor	0.02	10	NO
25 Year Exposure	Maximum Exposed Worker Receptor	0.02	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	0.000008	1.0	NO
Annual Average	Maximum Exposed Worker Receptor	0.00007	1.0	NO

1 INTRODUCTION

The purpose of this Health Risk Assessment (HRA) is to evaluate Project-related impacts to sensitive receptors (residential, schools) and adjacent workers as a result of heavy-duty diesel trucks accessing the site.

The South Coast Air Quality Management District (SCAQMD) identifies that if a Project is expected to generate/attract heavy-duty diesel trucks, which emit diesel particulate matter (DPM), preparation of a mobile source HRA is recommended. This document serves to meet the SCAQMD's request for preparation of a HRA. The mobile source HRA has been prepared in accordance with the document Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (2) and is comprised of all relevant and appropriate procedures presented by the U.S. EPA, California Environmental Protection Agency and SCAQMD. Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of ten (10) persons per million as the maximum acceptable incremental cancer risk due to DPM exposure. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulative impact.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (3). In this report the AQMD clearly states (Page D-3):

"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Non-carcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. Within this analysis, non-carcinogenic exposures of less than 1.0 are considered less-than-significant.

1.1 SITE LOCATION

The proposed Temescal Valley Business Park (PAR190052) site is generally located south of Dawson Road and east of Temescal Canyon Road in the County of Riverside, as shown on Exhibit 1-A. The Project site is currently vacant. The zoning designations for the Project site are Manufacturing-Medium (MM) and Mineral Resources and Related Manufacturing (M-R-A) (4) The Project site is surrounded by manufacturing facilities to the west and north and vacant land to the east and south. Interstate 15 (I-15) is approximately 0.10 miles west of the Project site.

1.2 PROJECT DESCRIPTION

As shown in Exhibit 1-B, the Project is proposed to consist of the development of a 183,456 square foot warehouse. The anticipated Project opening year is 2022. The Project also includes the proposed Temescal Canyon Road extension.

This analysis is intended to describe HRA impacts associated with the expected operational activities at the Project site. To present a conservative approach, this report assumes the Project will operate 24-hours daily for seven days per week.

Per the *Temescal Valley Business Park (PAR190052) Traffic Analysis* (TA) prepared by Urban Crossroads, Inc. the Project is expected to generate a total of approximately 3,016 two-way vehicular trips per day (1,500 trips inbound and 1,500 trips outbound), including 82 two-way truck trips per day (41 truck trips inbound and 41 truck trips outbound) (5).

EXHIBIT 1-A: LOCATION MAP

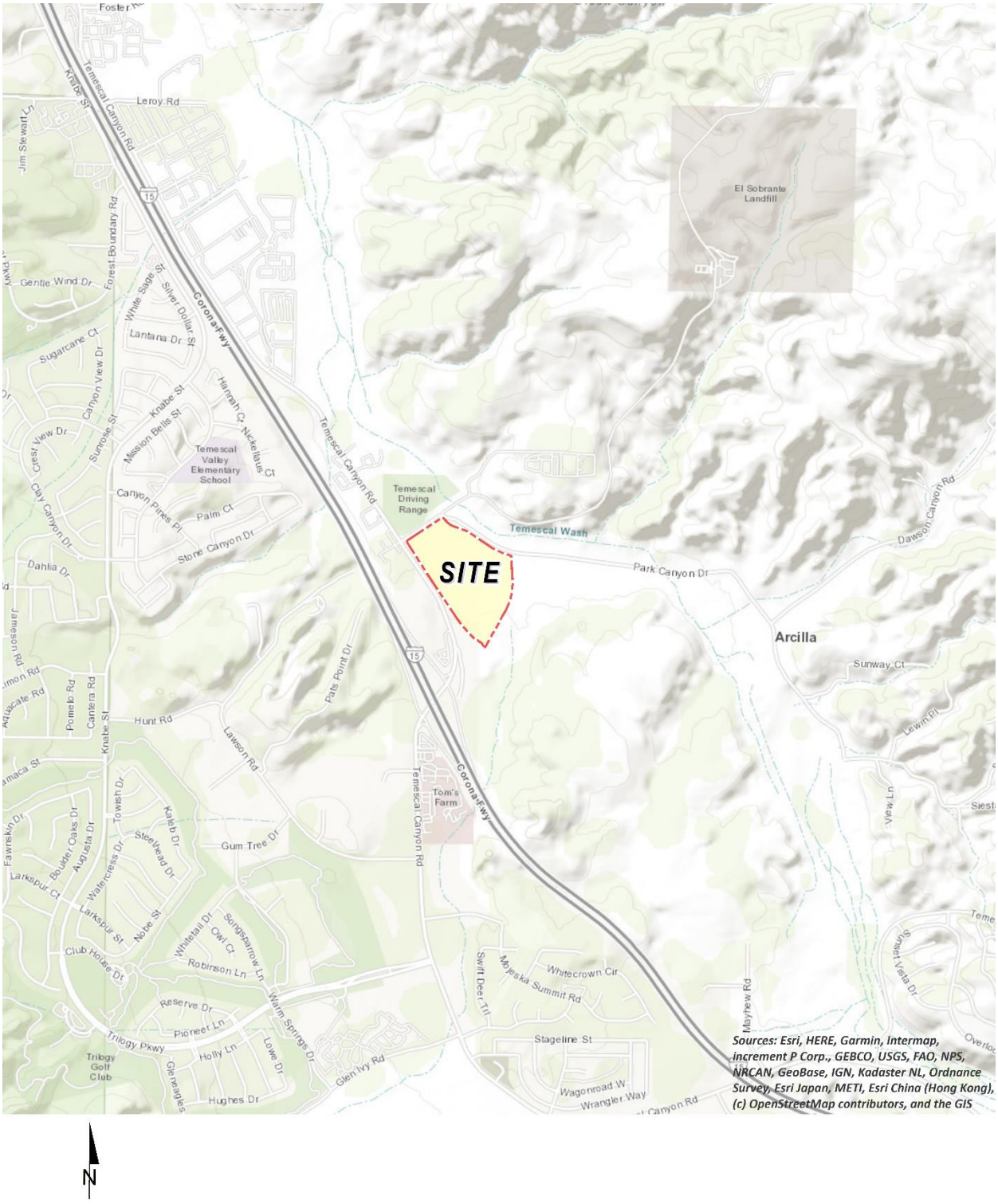
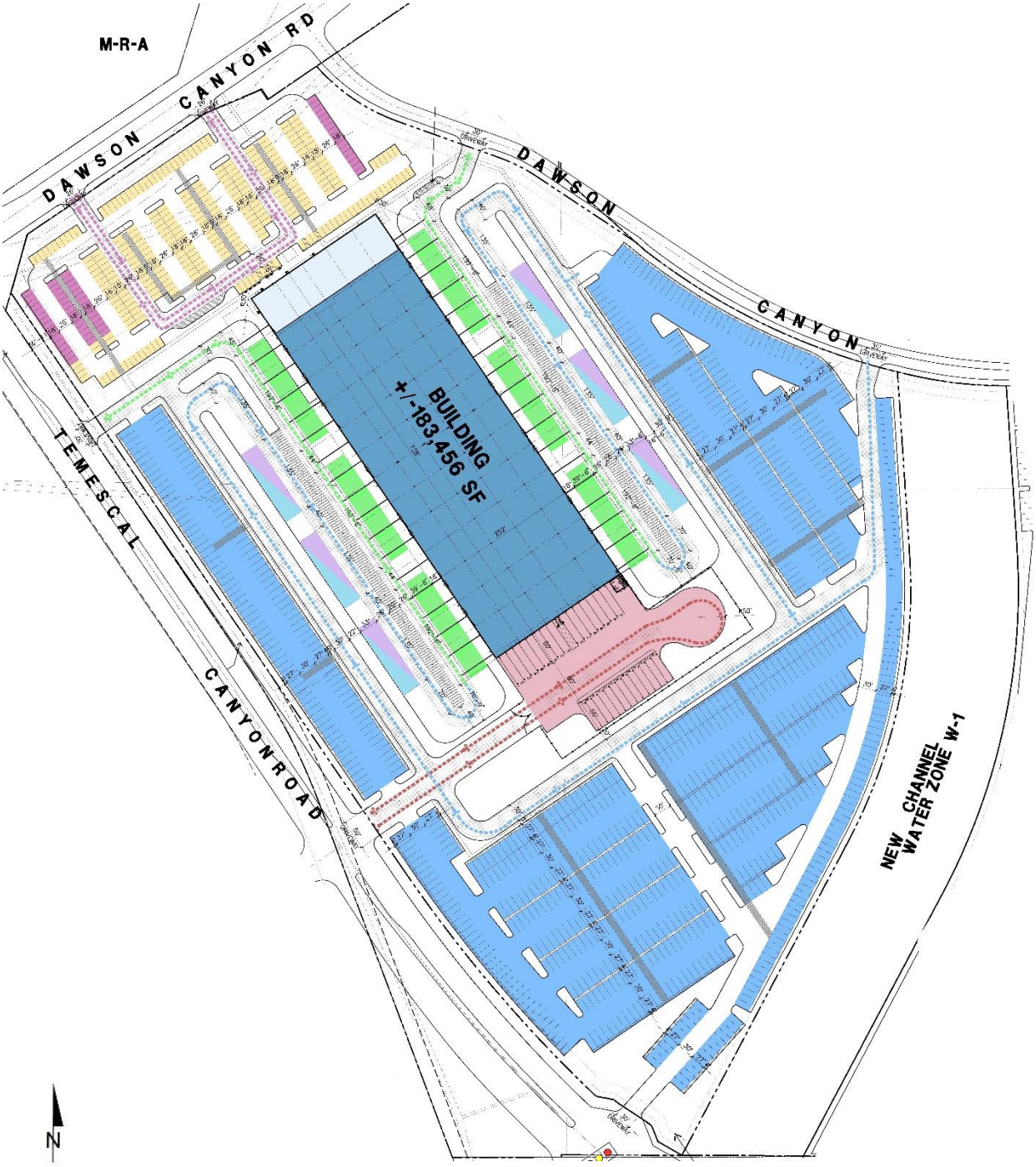


EXHIBIT 1-B: SITE PLAN



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2 BACKGROUND

2.1 BACKGROUND ON RECOMMENDED METHODOLOGY

As noted above, this HRA is based on SCAQMD guidelines to produce conservative estimates of risk posed by exposure to DPM. The conservative nature of this analysis is due primarily to the following factors:

- The ARB-adopted diesel exhaust Unit Risk Factor (URF) of 300 in one million per µg/m3 is based upon the upper 95 percentile of estimated risk for each of the epidemiological studies utilized to develop the URF. Using the 95th percentile URF represents a very conservative (health-protective) risk posed by DPM.
- The emissions derived assume that every truck accessing the project site will idle for 15 minutes under the unmitigated scenario, this is an overestimation of actual idling times and thus conservative.[1] It should be noted that ARB's anti-idling requirements impose a 5-minute maximum idling time and therefore the analysis conservatively overestimates DPM emissions from idling by a factor of 3.

2.2 EMISSIONS ESTIMATION

2.2.1 ON-SITE AND OFF-SITE TRUCK ACTIVITY

Vehicle DPM emissions were estimated using emission factors for particulate matter less than 10µm in diameter (PM_{10}) generated with the 2017 version of the Emission FACtor model (EMFAC) developed by the ARB. EMFAC 2017 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the ARB to project changes in future emissions from on-road mobile sources (6). The most recent version of this model, EMFAC 2017, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day.

Several distinct emission processes are included in EMFAC 2017. Emission factors calculated using EMFAC 2017 are expressed in units of grams per vehicle miles traveled (g/VMT) or grams per idle-hour (g/idle-hr), depending on the emission process. The emission processes and corresponding emission factor units associated with diesel particulate exhaust for this Project are presented below.

For this Project, annual average PM_{10} emission factors were generated by running EMFAC 2017 in EMFAC Mode for vehicles in the Riverside County jurisdiction. The EMFAC Mode generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of temperature, relative humidity, and vehicle speed.

[1] Although the Project is required to comply with ARB's idling limit of 5 minutes, staff at SCAQMD recommends that the on-site idling emissions should be estimated for 15 minutes of truck idling (personal communication, in person, with Jillian Wong, December 22, 2016), which would take into account on-site idling which occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc.

The model was run for speeds traveled in the vicinity of the Project. The vehicle travel speeds for each segment modeled are summarized below.

- Idling – on-site loading/unloading and truck gate
- 5 miles per hour – on-site vehicle movement including driving and maneuvering.
- 25 miles per hour – off-site vehicle movement including driving and maneuvering.

Calculated emission factors are shown at Table 2-1. As a conservative measure, a 2022 EMFAC 2017 run was conducted and a static 2022 emissions factor data set was used for the entire duration of analysis herein (e.g., 30 years). Use of 2022 emission factors would overstate potential impacts since this approach assumes that emission factors remain "static" and do not change over time due to improved vehicle efficiencies resulting from fleet turnover and implementation of cleaner technology with lower emissions. Based on EMFAC 2017, Heavy-Heavy-Duty Trucks comprise of 92.74% diesel trucks and have been accounted for accordingly in the emissions factor generation.

The vehicle DPM exhaust emissions were calculated for running exhaust emissions. The running exhaust emissions were calculated by applying the running exhaust PM10 emission factor (g/VMT) from EMFAC over the total distance traveled. The following equation was used to estimate off-site emissions for each of the different vehicle classes comprising the mobile sources (6):

$Emissions_{speedA}$ (g/s) = $EF_{RunExhaust}$ (g/VMT) * Distance (VMT/trip) * Number of Trips (trips/day) / seconds per day

Where:

$Emissions_{speedA}$ (g/s): Vehicle emissions at a given speed A;

$EF_{RunExhaust}$ (g/VMT): EMFAC running exhaust PM_{10} emission factor at speed A;

Distance (VMT/trip): Total distance traveled per trip.

Similar to off-site traffic, on-site vehicle running emissions were calculated by applying the running exhaust PM_{10} emission factor (g/VMT) from EMFAC and the total vehicle trip number over the length of the driving path using the same formula presented above for on-site emissions. In addition, on-site vehicle idling exhaust emissions were calculated by applying the idle exhaust PM_{10} emission factor (g/idle-hr) from EMFAC and the total truck trip over the total idle time (15 minutes).

TABLE 2-1: 2022 WEIGHTED AVERAGE DPM EMISSIONS FACTORS

Speed	Weighted Average
0 (idling)	0.1394 (g/idle-hr)
5	0.04031 (g/s)
25	0.01700 (g/s)

Each roadway was modeled as a line source (made up of multiple adjacent volume sources). Due to the large number of volume sources modeled for this analysis, the corresponding coordinates

of each volume source have not been included in this report but are included in Appendix "2.1". The DPM emission rate for each volume source was calculated by multiplying the emission factor (based on the average travel speed along the roadway) by the number of trips and the distance traveled along each roadway segment and dividing the result by the number of volume sources along that roadway, as illustrated on Table 2-2. The modeled emission sources are graphically illustrated on Exhibit 2-A[2]. The modeled truck travel routes included in the HRA are based on the truck trip distributions (inbound and outbound) available from the Project's *TA* (5). The modeled truck route is consistent with the trip distribution patterns identified in the Project's traffic study, is supported by substantial evidence, and was modeled to determine the potential impacts to sensitive receptors along the primary truck routes. The modeling domain is limited to the Project's primary truck route and includes off-site sources in the study area for more than 2 miles. This modeling domain is more conservative than using only a ¼ mile modeling domain which is supported by substantial evidence since several studies have shown that the greatest potential risks occur within a ¼ mile of the primary source of emissions (1) (in the case of the Project this is the on-site idling, travel, and on-site equipment).

On-site truck idling was estimated to occur as trucks enter and travel through the facility. Although the Project is required to comply with CARB's idling limit of 5 minutes, staff at SCAQMD recommends that the on-site idling emissions should be estimated for 15 minutes of truck idling (7), which would take into account on-site idling which occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc. As such, this analysis estimated truck idling at 15 minutes, consistent with SCAQMD's recommendation.

Per the *TA* prepared by Urban Crossroads, Inc. the Project is expected to generate a total of approximately 3,016 two-way vehicular trips per day (1,500 trips inbound and 1,500 trips outbound), including 82 two-way truck trips per day (41 truck trips inbound and 41 truck trips outbound) (5).

2 Appendix 2.1 includes the actual modeled source configuration from AERMOD. Exhibit 2-A is presented for graphical purposes for ease of review.

EXHIBIT 2-A: MODELED EMISSION SOURCES

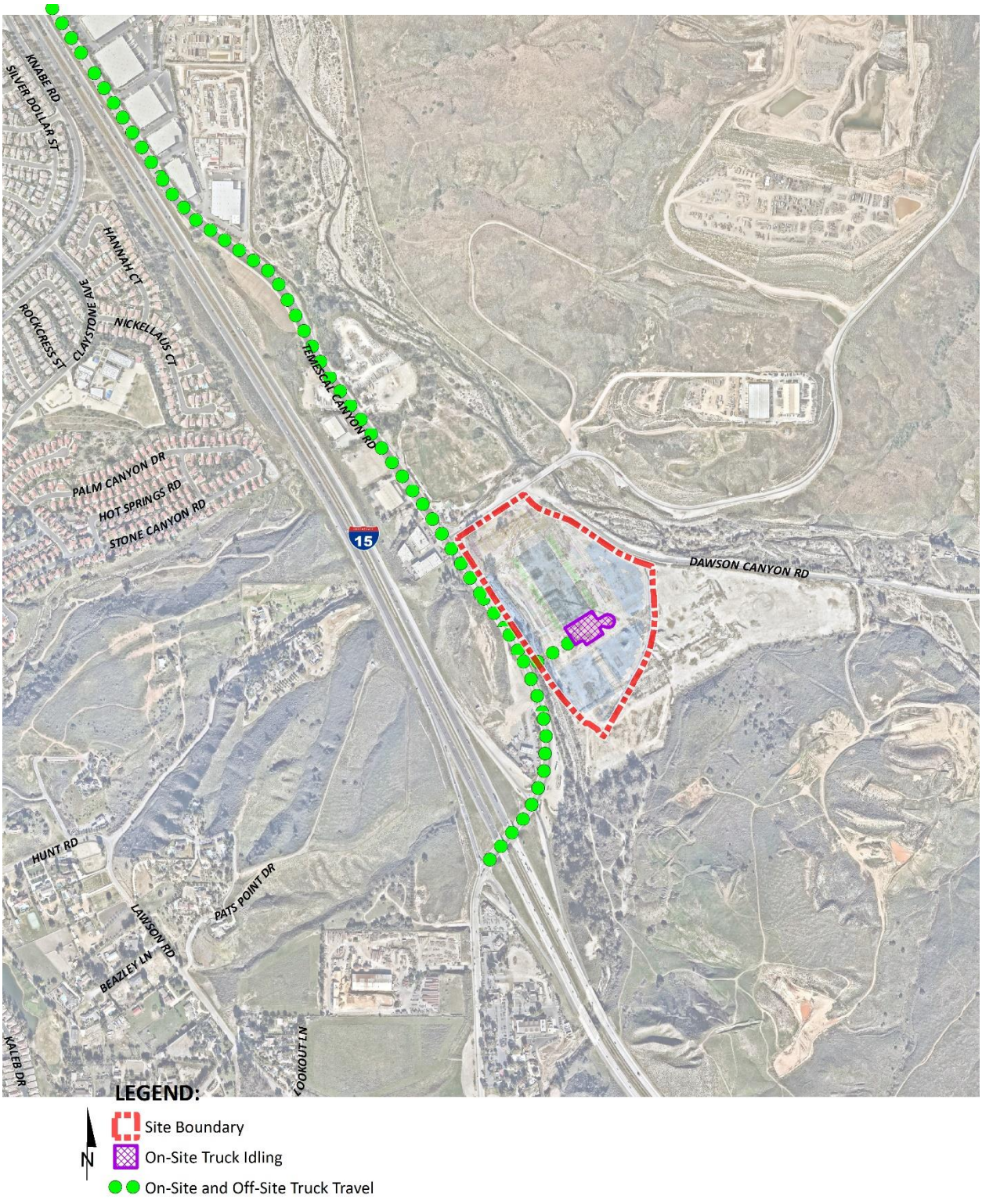


TABLE 2-2: DPM EMISSIONS FROM PROJECT TRUCKS (2022 ANALYSIS YEAR)

Truck Emission Rates						
Source	Trucks Per Day	VMT [a] (miles/day)	Truck Emission Rate [b] (grams/mile)	Truck Emission Rate [b] (grams/idle-hour)	Daily Truck Emissions [c] (grams/day)	Modeled Emission Rates (g/second)
On-Site Idling	41			0.0139	0.14	1.654E-06
On-Site Travel	82	10.55	0.0403		0.43	4.923E-06
Off-Site Travel 75% (I-15/Temescal)	62	19.44	0.0170		0.33	3.824E-06
Off-Site Travel 25% (I-15/Weirick)	21	47.59	0.0170		0.81	9.363E-06

[a] Vehicle miles traveled are for modeled truck route only.

[b] Emission rates determined using EMFAC 2017. Idle emission rates are expressed in grams per idle hour rather than grams per mile.

[c] This column includes the total truck travel and truck idle emissions. For idle emissions this column includes emissions based on the assumption that each truck idles for 15 minutes.

2.3 EXPOSURE QUANTIFICATION

The analysis herein has been conducted in accordance with the guidelines in the Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (2). SCAQMD recommends using the Environmental Protection Agency's (U.S. EPA's) AERMOD model. For purposes of this analysis, the Lakes AERMOD View (Version 9.8.3) was used to calculate annual average particulate concentrations associated with site operations. Lakes AERMOD View was utilized to incorporate the U.S. EPA's latest AERMOD Version 19191 (8).

The model offers additional flexibility by allowing the user to assign an initial release height and vertical dispersion parameters for mobile sources representative of a roadway. For this HRA, the roadways were modeled as adjacent volume sources. Roadways were modeled using the U.S. EPA's haul route methodology for modeling of on-site and off-site truck movement. More specifically, the Haul Road Volume Source Calculator in Lakes AERMOD View has been utilized to determine the release height parameters. Based on the U.S. EPA methodology, the Project's modeled sources would result in a release height of 3.49 meters, and an initial lateral dimension of 4.0 meters, and an initial vertical dimension of 3.25 meters.

SCAQMD required model parameters are presented in Table 2-3 (9). The model requires additional input parameters including emission data and local meteorology. Meteorological data from the SCAQMD's Riverside Airport monitoring station (SRA 23) was used to represent local weather conditions and prevailing winds (10). A wind rose exhibit of the Perris monitoring station is provided at Exhibit 2-B.

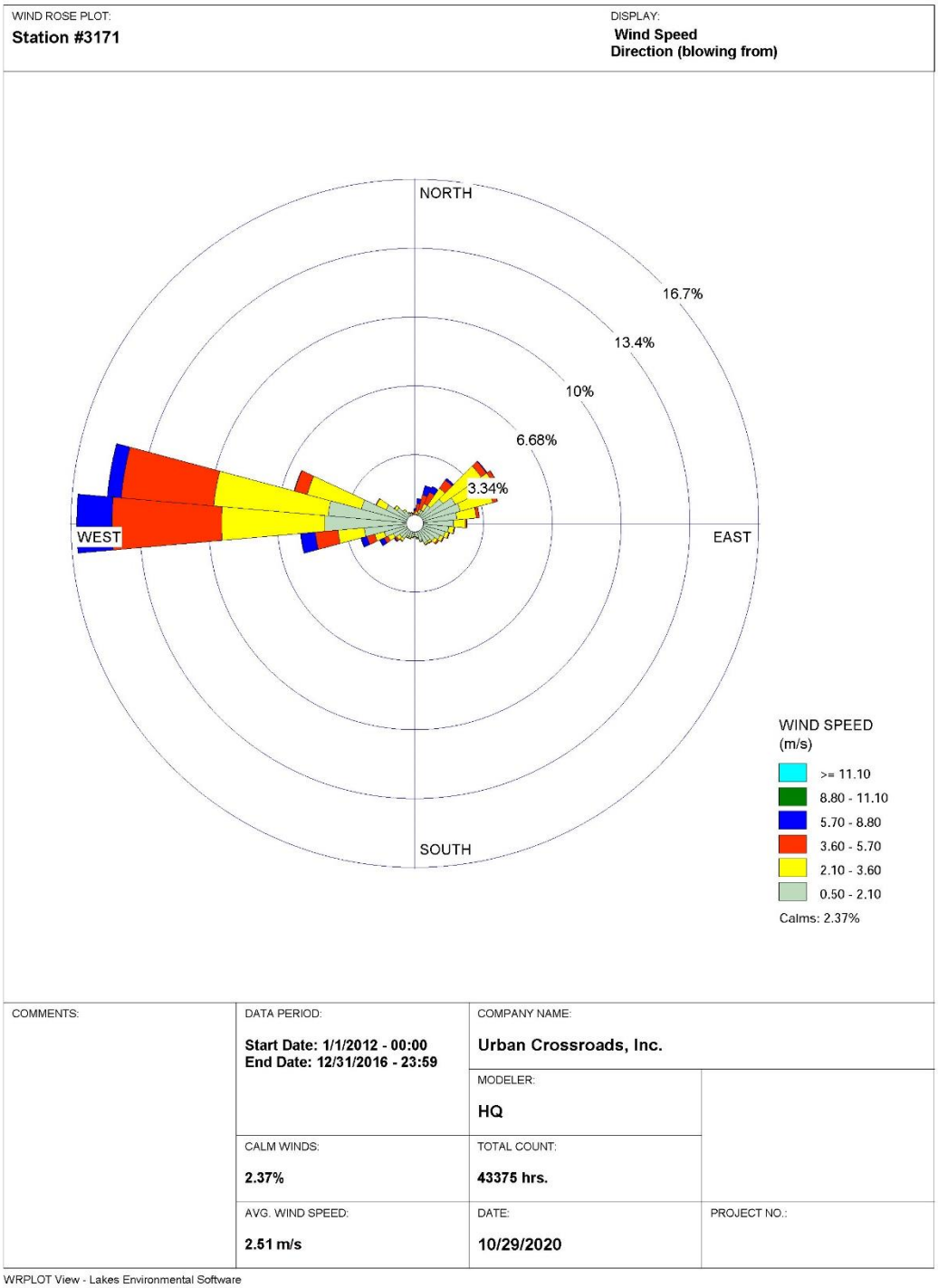
TABLE 2-3: AERMOD MODEL PARAMETERS

Dispersion Coefficient	Urban
Population	2,189,641
Terrain	Elevated (Regulatory Default)
Averaging Time	1 year (5-year Meteorological Data Set)
Receptor Height	0 meters (Regulatory Default)

Universal Transverse Mercator (UTM) coordinates for World Geodetic System (WGS) 84 were used to locate the project boundaries, each volume source location, and receptor locations in the project vicinity. The AERMOD dispersion model summary output files for the proposed facility are presented in Appendix "2.1". Modeled sensitive receptors were placed at residential and non-residential locations.

Consistent with SCAQMD modeling guidance, all receptors were set to the elevation so that only ground-level concentrations are analyzed (9). United States Geological Survey (USGS) Digital Elevation Model (DEM) terrain data based on a 7.5-minute topographic quadrangle map series using AERMAP was utilized in the HRA modeling to set elevations.

EXHIBIT 2-B: WIND ROSE (SRA 24)



Receptors may be placed at applicable structure locations for residential and worker property and not necessarily the boundaries of these uses. It should be noted that the primary purpose of receptor placement is focused on long-term exposure. For example, the HRA evaluates the potential health risks to residential and worker over a period of 30 or 25 years of exposure, respectively. As such, even though it is unlikely to occur in practical terms (because the amount of time spent indoors), this study assumes that a resident or worker would be exposed over a long-period of time for 12 or 24-hours per day at the structure where they reside or work.

Furthermore, worker receptors immediately adjacent to the Project site have been evaluated in the HRA. Any impacts to workers located further away from the Project site than the modeled worker receptors would have a lesser impact than what has already been disclosed in the HRA at the MEIW[3].

Discrete variants for daily breathing rates, exposure frequency, and exposure duration were obtained from relevant distribution profiles presented in the 2015 OEHHA Guidelines. Tables 2-4 and 2-5 summarize the Exposure Parameters for Residents and Offsite Workers based on 2015 OEHHA Guidelines. Appendix 2.2 includes the detailed risk calculation.

2.4 CARCINOGENIC CHEMICAL RISK

Based on the South Coast AQMD Air Quality Significance Thresholds (11) (April 2019), emissions of toxic air contaminants (TACs) are considered significant if a HRA shows an increased risk of greater than 10 in one million. Based on guidance from the SCAQMD in the document Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (2), for purposes of this analysis, 10 in one million is used as the cancer risk threshold for the Project.

Excess cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens over a specified exposure duration. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). A risk level of 10 in one million implies a likelihood that up to 10 people, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time. As an example, the risk of dying from accidental drowning is 1,000 in a million which is 100 times more than the SCAQMD's threshold of 10 in one million, the nearest comparison to 10 in one million is the 7 in one million lifetime chance that an individual would be struck and killed by lightning (12).

Guidance from CARB and the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA) recommends a refinement to the standard point estimate approach when alternate human body weights and breathing rates are utilized to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose. Once determined, contaminant dose is multiplied by the cancer potency factor (CPF) in units of

3 Appendix 2.1 also includes gridded receptors with 100-meter spacing, however the discrete modeled locations identified on Exhibit 2-C illustrate the maximally impacted residential and non-residential locations in the Project vicinity.

TABLE 2-4: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (30 YEAR RESIDENTIAL)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
-0.25 to 0	361	10	0.25	0.85	350	24
0 to 2	1090	10	2	0.85	350	24
2 to 16	572	3	14	0.72	350	24
16 to 30	261	1	14	0.73	350	24

TABLE 2-5: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (25 YEAR WORKER)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (days/year)	Exposure Time (hours/day)
16 to 41	230	1	25	250	12

inverse dose expressed in milligrams per kilogram per day (mg/kg/day)-1 to derive the cancer risk estimate. Therefore, to assess exposures, the following dose algorithm was utilized.

$$DOSEair = (Cair \times [BR/BW] \times A \times EF) \times (1 \times 10^{-6})$$

Where:

DOSEair = chronic daily intake (mg/kg/day)

Cair = concentration of contaminant in air (ug/m3)

[BR/BW] = daily breathing rate normalized to body weight (L/kg BW-day)

A = inhalation absorption factor

EF = exposure frequency (days/365 days)

BW = body weight (kg)

1×10^{-6} = conversion factors (ug to mg, L to m3)

$$RISKair = DOSEair \times CPF \times ED/AT$$

Where:

DOSEair = chronic daily intake (mg/kg/day)

CPF = cancer potency factor

ED = number of years within particular age group

AT = averaging time

2.5 NON-CARCINOGENIC EXPOSURES

An evaluation of the potential noncarcinogenic effects of chronic exposures was also conducted. Adverse health effects are evaluated by comparing a compound's annual concentration with its toxicity factor or Reference Exposure Level (REL). The REL for diesel particulates was obtained from OEHHA for this analysis. The chronic reference exposure level (REL) for DPM was established by OEHHA as 5 $\mu g/m^3$ (OEHHA Toxicity Criteria Database, http://www.oehha.org/risk/chemicaldb/index.asp).

The non-cancer hazard index was calculated (consistent with SCAQMD methodology) as follows:

The relationship for the non-cancer health effects of DPM is given by the following equation:

$$HI_{DPM} = C_{DPM}/REL_{DPM}$$

Where:

HI_{DPM} = Hazard Index; an expression of the potential for non-cancer health effects.

C_{DPM} = Annual average DPM concentration ($\mu g/m^3$).

REL_{DPM} = Reference exposure level (REL) for DPM; the DPM concentration at which no adverse health effects are anticipated.

2.6 POTENTIAL PROJECT-RELATED DPM SOURCE CANCER AND NON-CANCER RISKS[4]

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project DPM source emissions is Location R2, which represents the existing residence on Lawson Road, approximately 1,317 feet west of the Project site. R2 is placed at the private outdoor living area (backyard) facing the Project site. At the maximally exposed individual receptor (MEIR), the maximum incremental cancer risk attributable to Project DPM source emissions is estimated at 0.02 in one million, which is less than the South Coast Air Quality Management District's (SCAQMD's) significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be 0.000008, which would not exceed the applicable significance threshold of 1.0. Because all other modeled residential receptors are exposed to lesser concentrations and are located at a greater distance than the MEIR analyzed herein, and DPM generally dissipates with distance from the source, all other residential receptors in the vicinity of the Project site would be exposed to less emissions

4 SCAQMD guidance does not require assessment of the potential health risk to on-site workers. Excerpts from the document OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines—The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003), also indicate that it is not necessary to examine the health effects to on-site workers unless required by RCRA (Resource Conservation and Recovery Act) / CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) or the worker resides on-site.

and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby residences. The nearest modeled receptors for operational activity are illustrated on Exhibit 2-C.

Worker Exposure Scenario:

The worker receptor land use with the greatest potential exposure to Project DPM source emissions is Location R6, which represents GM & J Laser Cutting, Inc. located at 23191 Temescal Canyon Road, approximately 195 feet west of the Project site. R6 is placed at the building façade where a worker could remain for a typical workday. At the maximally exposed individual worker (MEIW), the maximum incremental cancer risk impact is 0.02 in one million which is less than the SCAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be 0.00007, which would not exceed the applicable significance threshold of 1.0. Because all other modeled worker receptors are located at a greater distance than the MEIW analyze herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent workers. The nearest modeled receptors for operational activity are illustrated on Exhibit 2-C.

School Child Exposure Scenario:

There are no schools located within a ¼ mile of the Project site. As such, there would be no significant impacts that would occur to any schools in the vicinity of the Project. Proximity to sources of toxics is critical to determining the impact. In traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70-percent drop-off in particulate pollution levels at 500 feet. Based on CARB and SCAQMD emissions and modeling analyses, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from a distribution center (1). As such, the Project will not cause a significant human health or cancer risk to nearby school children.

For purposes of this analysis the cancer risk totaled less than ten in one million and the hazard index for the respiratory endpoint totaled less than one for all receptors in the project vicinity, and thus is less than significant.

EXHIBIT 2-C: MODELED RECEPTORS

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3 REFERENCES

1. **Air Resources Board.** *Air Quality and Land Use Handbook: A Community Health Perspective.* 2005.
2. **South Coast Air Quality Managment District.** Mobile Source Toxics Analysis. [Online] 2003. http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html.
3. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. [Cited: June 6, 2019.] http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf?sfvrsn=2.
4. **County of Riverside.** Riverside County Map My County. *Riverside County Information Technology.* [Online] https://gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public.
5. **Urban Crossroads, Inc.** *Temescal Valley Business Park Traffic Analysis.* 2020.
6. **California Air Resources Board.** EMFAC 2017. [Online] https://www.arb.ca.gov/emfac/2017/.
7. **Wong, Jillian.** *Planning, Rule Development & Area Sources.* December 22, 2016.
8. **Environmental Protection Agency.** User's Guide for the AMS/EPA Regulatory Model (AERMOD). [Online] 2019. https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf.
9. **South Coast Air Quality Management District.** South Coast AQMD Modeling Guidance for AERMOD. [Online] [Cited: September 18, 2019.] http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance.
10. —. Data for AERMOD. [Online] [Cited: June 10, 2019.] https://www.aqmd.gov/home/air-quality/air-quality-data-studies/meteorological-data/data-for-aermod.
11. —. South Coast AQMD Air Quality Significance Thresholds. [Online] April 2019. [Cited: June 6, 2019.] http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2.
12. **National Safety Council.** Injury Fact Chart. [Online] [Cited: September 18, 2019.] https://www.nsc.org/work-safety/tools-resources/injury-facts/chart.

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4 CERTIFICATION

The contents of this health risk assessment represent an accurate depiction of the impacts to sensitive receptors associated with the proposed Temescal Valley Business Park (PAR190052) Project. The information contained in this health risk assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May, 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June, 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June, 2013
Planned Communities and Urban Infill – Urban Land Institute • June, 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007
AB2588 Regulatory Standards – Trinity Consultants • November, 2006
Air Dispersion Modeling – Lakes Environmental • June, 2006

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APPENDIX 2.1:

AERMOD MODEL INPUT/OUTPUT

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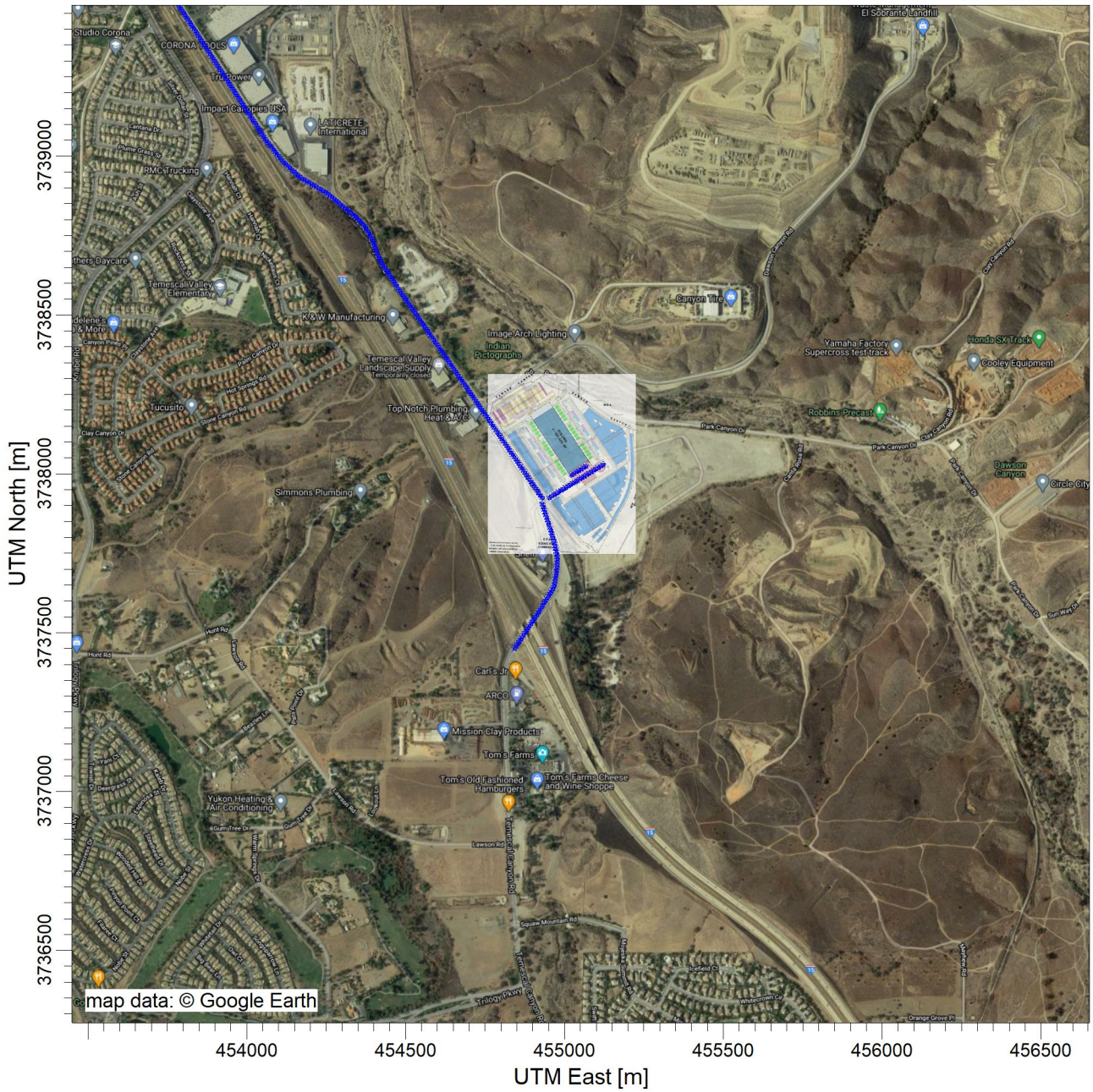
PROJECT TITLE:

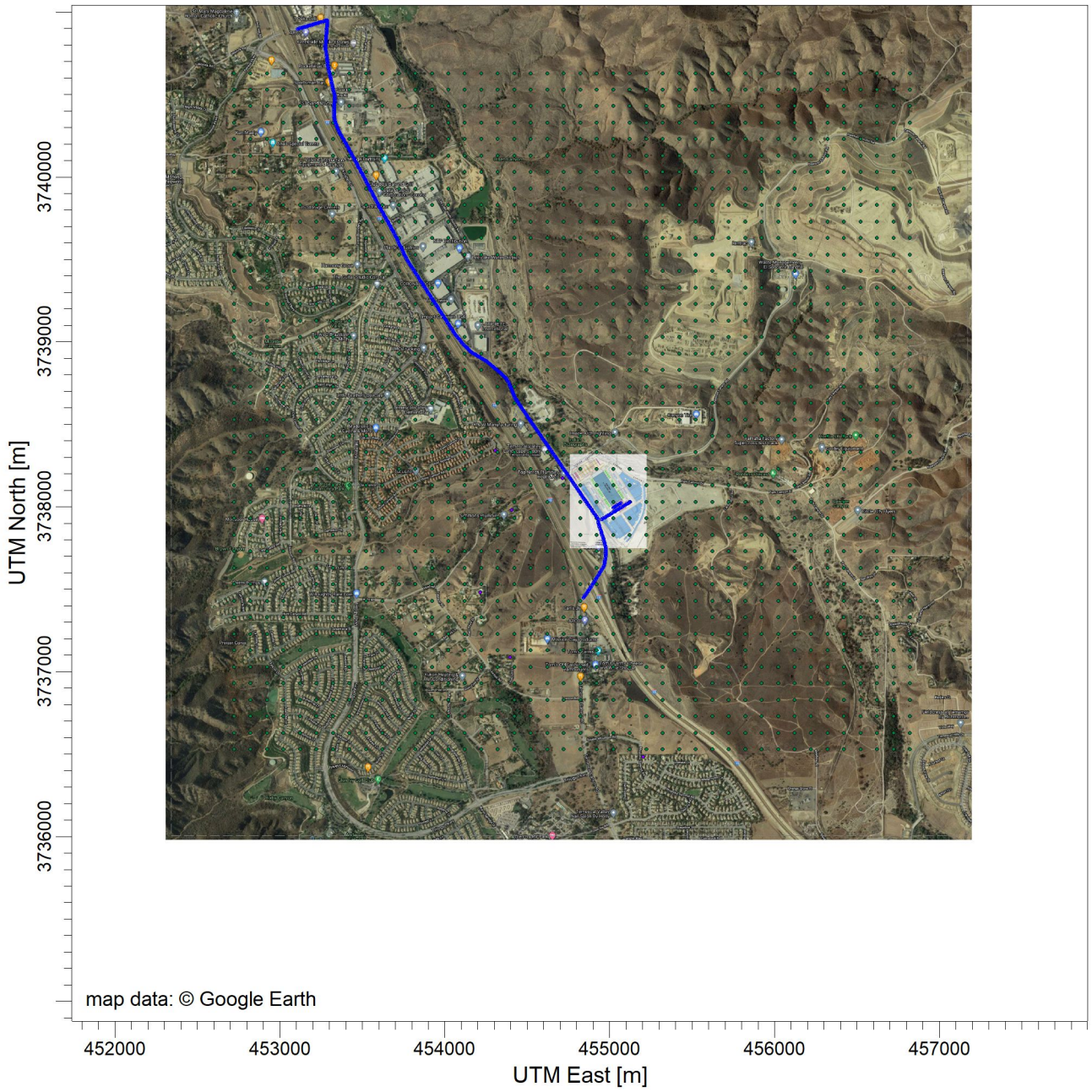
C:\Lakes\AERMOD View\13627 HRA\13627 HRA.isc



COMMENTS:	SOURCES: **4**	COMPANY NAME:	
	RECEPTORS: **1771**	MODELER:	
		SCALE: 1:20,146 0 0.5 km	
		DATE: **3/3/2021**	PROJECT NO.:

PROJECT TITLE:

C:\Lakes\AERMOD View\13627 HRA\13627 HRA.isc



COMMENTS:	SOURCES: **4**	COMPANY NAME:	
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		SCALE: 1:38,755 0 1 km	
		DATE: **3/3/2021**	PROJECT NO.:

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** AERMOD View Ver. 9.9.0
** Lakes Environmental Software Inc.
** Date: 11/23/2020
** File: C:\Lakes\AERMOD View\13627 HRA (REV)\13627 HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\13627 HRA\13627 HRA.isc
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2189641
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "13627 HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
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** Source ID - Type - X Coord. - Y Coord. **
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** SZINIT = 3.25
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** 455074.639, 3738027.621, 286.06, 3.49, 4.00
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   LOCATION L0007541     VOLUME   455038.893 3738005.845 286.70
   LOCATION L0007542     VOLUME   455046.229 3738010.314 286.31
   LOCATION L0007543     VOLUME   455053.565 3738014.783 286.04
   LOCATION L0007544     VOLUME   455060.901 3738019.252 285.96
   LOCATION L0007545     VOLUME   455068.237 3738023.721 285.84
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** PREFIX
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** Nodes = 2
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   LOCATION L0007547     VOLUME   454961.291 3737929.911 289.99
   LOCATION L0007548     VOLUME   454968.615 3737934.398 289.92
   LOCATION L0007549     VOLUME   454975.940 3737938.886 289.77
   LOCATION L0007550     VOLUME   454983.264 3737943.374 289.55
   LOCATION L0007551     VOLUME   454990.589 3737947.861 289.27
   LOCATION L0007552     VOLUME   454997.914 3737952.349 289.09
   LOCATION L0007553     VOLUME   455005.238 3737956.836 288.98
   LOCATION L0007554     VOLUME   455012.563 3737961.324 288.83
   LOCATION L0007555     VOLUME   455019.887 3737965.812 288.67
   LOCATION L0007556     VOLUME   455027.212 3737970.299 288.27
   LOCATION L0007557     VOLUME   455034.537 3737974.787 287.88
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   LOCATION L0007559     VOLUME   455049.186 3737983.762 287.09
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   LOCATION L0007565     VOLUME   455093.133 3738010.687 286.18
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   LOCATION L0007567     VOLUME   455107.782 3738019.663 285.88
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** Emission Rate = 3.824E-06
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** 454966.406, 3737642.316, 301.87, 3.49, 4.00
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   LOCATION L0007576     VOLUME   454946.087 3737855.610 292.16
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LOCATION L0008047     VOLUME   453238.159 3740936.741 268.89
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LOCATION L0008049     VOLUME   453221.692 3740931.846 269.56
LOCATION L0008050     VOLUME   453213.458 3740929.398 270.21
LOCATION L0008051     VOLUME   453205.224 3740926.951 270.92
LOCATION L0008052     VOLUME   453196.990 3740924.503 271.52
LOCATION L0008053     VOLUME   453188.756 3740922.055 272.03
LOCATION L0008054     VOLUME   453180.522 3740919.608 272.37
LOCATION L0008055     VOLUME   453172.288 3740917.160 272.75
LOCATION L0008056     VOLUME   453164.054 3740914.713 273.18
LOCATION L0008057     VOLUME   453155.820 3740912.265 273.78
LOCATION L0008058     VOLUME   453147.586 3740909.817 274.53
LOCATION L0008059     VOLUME   453139.353 3740907.370 275.23
LOCATION L0008060     VOLUME   453131.119 3740904.922 275.88
LOCATION L0008061     VOLUME   453122.885 3740902.474 276.45
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   LOCATION L0008062     VOLUME   453114.651 3740900.027 277.00
   LOCATION L0008063     VOLUME   453106.417 3740897.579 277.55
** End of LINE VOLUME Source ID = SLINE4
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0007539     0.0000002363      3.49      4.00      3.25
   SRCPARAM L0007540     0.0000002363      3.49      4.00      3.25
   SRCPARAM L0007541     0.0000002363      3.49      4.00      3.25
   SRCPARAM L0007542     0.0000002363      3.49      4.00      3.25
   SRCPARAM L0007543     0.0000002363      3.49      4.00      3.25
   SRCPARAM L0007544     0.0000002363      3.49      4.00      3.25
   SRCPARAM L0007545     0.0000002363      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0007546     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007547     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007548     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007549     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007550     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007551     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007552     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007553     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007554     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007555     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007556     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007557     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007558     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007559     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007560     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007561     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007562     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007563     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007564     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007565     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007566     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007567     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007568     0.0000002051      3.49      4.00      3.25
   SRCPARAM L0007569     0.0000002051      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0007570     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007571     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007572     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007573     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007574     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007575     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007576     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007577     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007578     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007579     0.00000006481      3.49      4.00      3.25
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   SRCPARAM L0007580     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007581     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007582     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007583     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007584     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007585     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007586     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007587     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007588     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007589     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007590     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007591     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007592     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007593     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007594     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007595     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007596     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007597     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007598     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007599     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007600     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007601     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007602     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007603     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007604     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007605     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007606     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007607     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007608     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007609     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007610     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007611     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007612     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007613     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007614     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007615     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007616     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007617     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007618     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007619     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007620     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007621     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007622     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007623     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007624     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007625     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007626     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007627     0.00000006481      3.49      4.00      3.25
   SRCPARAM L0007628     0.00000006481      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0007629     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007630     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007631     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007632     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007633     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007634     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007635     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007636     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007637     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007638     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007639     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007640     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007641     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007642     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007643     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007644     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007645     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007646     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007647     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007648     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007649     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007650     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007651     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007652     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007653     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007654     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007655     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007656     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007657     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007658     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007659     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007660     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007661     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007662     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007663     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007664     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007665     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007666     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007667     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007668     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007669     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007670     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007671     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007672     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007673     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007674     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007675     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007676     0.00000002152      0.00      4.00      3.25
   SRCPARAM L0007677     0.00000002152      0.00      4.00      3.25
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SRCPARAM L0007678     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007679     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007680     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007681     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007682     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007683     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007684     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007685     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007686     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007687     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007688     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007689     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007690     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007691     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007692     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007693     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007694     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007695     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007696     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007697     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007698     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007699     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007700     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007701     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007702     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007703     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007704     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007705     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007706     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007707     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007708     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007709     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007710     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007711     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007712     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007713     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007714     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007715     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007716     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007717     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007718     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007719     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007720     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007721     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007722     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007723     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007724     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007725     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007726     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007727     0.00000002152      0.00      4.00      3.25
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SRCPARAM L0007728     0.00000002152      0.00      4.00      3.25
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SRCPARAM L0007730     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007731     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007732     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007733     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007734     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007735     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007736     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007737     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007738     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007739     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007740     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007741     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007742     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007743     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007744     0.00000002152      0.00      4.00      3.25
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SRCPARAM L0007747     0.00000002152      0.00      4.00      3.25
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SRCPARAM L0007755     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007756     0.00000002152      0.00      4.00      3.25
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SRCPARAM L0007765     0.00000002152      0.00      4.00      3.25
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SRCPARAM L0007774     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007775     0.00000002152      0.00      4.00      3.25
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SRCPARAM L0007777     0.00000002152      0.00      4.00      3.25
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SRCPARAM L0007781     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007782     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007783     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007784     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007785     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007786     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007787     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007788     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007789     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007790     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007791     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007792     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007793     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007794     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007795     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007796     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007797     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007798     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007799     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007800     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007801     0.00000002152      0.00      4.00      3.25
SRCPARAM L0007802     0.00000002152      0.00      4.00      3.25
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SRCPARAM L0007805     0.00000002152      0.00      4.00      3.25
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** ------------------------------------------------------------------
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   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "13627 HRA.rou"
RE FINISHED
**
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**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
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   PROFFILE LakeElsinoreADJU\ELSI_V9_ADJU\ELSI_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 406.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "13627 HRA.AD\AN00GALL.PLT" 31
   SUMMFILE "13627 HRA.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


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


    ********   WARNING MESSAGES   ********
 ME W186    1213       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
      0.50
 ME W187    1213       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
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HRA.isc                         ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
                        ***        15:46:19

                                   PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                                    ***     MODEL SETUP OPTIONS SUMMARY
  ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -

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

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   525 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   2189641.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
         ADJ_U*   - Use ADJ_U* option for SBL in AERMET
         CCVR_Sub - Meteorological data includes CCVR substitutions
         TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  DPM

 **Model Calculates ANNUAL Averages Only

 **This Run Includes:    525 Source(s);       1 Source Group(s); and       7
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    525 VOLUME source(s)
                 and:      0 AREA type source(s)
```

```
                and:      0 LINE source(s)
                and:      0 RLINE/RLINEXT source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with      0 line(s)


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

 **The AERMET Input Meteorological Data Version Date:  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) =   406.00 ;  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 =      3.7 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   13627 HRA.err

 **File for Summary of Results:   13627 HRA.sum

 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                          ***        11/23/20
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                       ***        15:46:19

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC) VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0007539	0	0.23630E-06	455024.2	3737996.9	287.5	3.49	4.00	3.25	YES
L0007540	0	0.23630E-06	455031.6	3738001.4	287.1	3.49	4.00	3.25	YES
L0007541	0	0.23630E-06	455038.9	3738005.8	286.7	3.49	4.00	3.25	YES
L0007542	0	0.23630E-06	455046.2	3738010.3	286.3	3.49	4.00	3.25	YES
L0007543	0	0.23630E-06	455053.6	3738014.8	286.0	3.49	4.00	3.25	YES
L0007544	0	0.23630E-06	455060.9	3738019.3	286.0	3.49	4.00	3.25	YES
L0007545	0	0.23630E-06	455068.2	3738023.7	285.8	3.49	4.00	3.25	YES
L0007546	0	0.20510E-06	454954.0	3737925.4	290.2	3.49	4.00	3.25	YES
L0007547	0	0.20510E-06	454961.3	3737929.9	290.0	3.49	4.00	3.25	YES
L0007548	0	0.20510E-06	454968.6	3737934.4	289.9	3.49	4.00	3.25	YES
L0007549	0	0.20510E-06	454975.9	3737938.9	289.8	3.49	4.00	3.25	YES
L0007550	0	0.20510E-06	454983.3	3737943.4	289.6	3.49	4.00	3.25	YES
L0007551	0	0.20510E-06	454990.6	3737947.9	289.3	3.49	4.00	3.25	YES
L0007552	0	0.20510E-06	454997.9	3737952.3	289.1	3.49	4.00	3.25	YES
L0007553	0	0.20510E-06	455005.2	3737956.8	289.0	3.49	4.00	3.25	YES
L0007554	0	0.20510E-06	455012.6	3737961.3	288.8	3.49	4.00	3.25	YES
L0007555	0	0.20510E-06	455019.9	3737965.8	288.7	3.49	4.00	3.25	YES
L0007556	0	0.20510E-06	455027.2	3737970.3	288.3	3.49	4.00	3.25	YES
L0007557	0	0.20510E-06	455034.5	3737974.8	287.9	3.49	4.00	3.25	YES
L0007558	0	0.20510E-06	455041.9	3737979.3	287.5	3.49	4.00	3.25	YES

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 L0007559         0   0.20510E-06  455049.2 3737983.8   287.1     3.49     4.00
3.25     YES
 L0007560         0   0.20510E-06  455056.5 3737988.2   286.9     3.49     4.00
3.25     YES
 L0007561         0   0.20510E-06  455063.8 3737992.7   286.8     3.49     4.00
3.25     YES
 L0007562         0   0.20510E-06  455071.2 3737997.2   286.6     3.49     4.00
3.25     YES
 L0007563         0   0.20510E-06  455078.5 3738001.7   286.5     3.49     4.00
3.25     YES
 L0007564         0   0.20510E-06  455085.8 3738006.2   286.3     3.49     4.00
3.25     YES
 L0007565         0   0.20510E-06  455093.1 3738010.7   286.2     3.49     4.00
3.25     YES
 L0007566         0   0.20510E-06  455100.5 3738015.2   286.0     3.49     4.00
3.25     YES
 L0007567         0   0.20510E-06  455107.8 3738019.7   285.9     3.49     4.00
3.25     YES
 L0007568         0   0.20510E-06  455115.1 3738024.1   285.6     3.49     4.00
3.25     YES
 L0007569         0   0.20510E-06  455122.4 3738028.6   285.2     3.49     4.00
3.25     YES
 L0007570         0   0.64810E-07  454930.2 3737904.6   291.7     3.49     4.00
3.25     YES
 L0007571         0   0.64810E-07  454932.8 3737896.5   291.9     3.49     4.00
3.25     YES
 L0007572         0   0.64810E-07  454935.5 3737888.3   291.9     3.49     4.00
3.25     YES
 L0007573         0   0.64810E-07  454938.1 3737880.1   291.9     3.49     4.00
3.25     YES
 L0007574         0   0.64810E-07  454940.8 3737872.0   291.9     3.49     4.00
3.25     YES
 L0007575         0   0.64810E-07  454943.4 3737863.8   292.0     3.49     4.00
3.25     YES
 L0007576         0   0.64810E-07  454946.1 3737855.6   292.2     3.49     4.00
3.25     YES
 L0007577         0   0.64810E-07  454948.7 3737847.4   292.2     3.49     4.00
3.25     YES
 L0007578         0   0.64810E-07  454951.4 3737839.3   292.2     3.49     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                          ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE VARY BY	EMISSION RATE
L0007579	0	0.64810E-07	454954.0	3737831.1	292.4	3.49	4.00	3.25	YES	
L0007580	0	0.64810E-07	454956.7	3737822.9	292.6	3.49	4.00	3.25	YES	
L0007581	0	0.64810E-07	454959.3	3737814.8	292.7	3.49	4.00	3.25	YES	
L0007582	0	0.64810E-07	454961.6	3737806.5	293.0	3.49	4.00	3.25	YES	
L0007583	0	0.64810E-07	454963.8	3737798.2	293.5	3.49	4.00	3.25	YES	
L0007584	0	0.64810E-07	454966.1	3737789.9	294.0	3.49	4.00	3.25	YES	
L0007585	0	0.64810E-07	454968.3	3737781.6	294.4	3.49	4.00	3.25	YES	
L0007586	0	0.64810E-07	454970.5	3737773.3	294.8	3.49	4.00	3.25	YES	
L0007587	0	0.64810E-07	454972.8	3737765.0	295.3	3.49	4.00	3.25	YES	
L0007588	0	0.64810E-07	454974.6	3737756.6	295.8	3.49	4.00	3.25	YES	
L0007589	0	0.64810E-07	454975.6	3737748.1	296.3	3.49	4.00	3.25	YES	
L0007590	0	0.64810E-07	454976.6	3737739.6	296.9	3.49	4.00	3.25	YES	
L0007591	0	0.64810E-07	454977.4	3737731.0	297.4	3.49	4.00	3.25	YES	
L0007592	0	0.64810E-07	454977.0	3737722.4	298.0	3.49	4.00	3.25	YES	
L0007593	0	0.64810E-07	454976.6	3737713.9	298.5	3.49	4.00	3.25	YES	
L0007594	0	0.64810E-07	454976.1	3737705.3	299.0	3.49	4.00	3.25	YES	
L0007595	0	0.64810E-07	454975.2	3737696.8	299.4	3.49	4.00	3.25	YES	
L0007596	0	0.64810E-07	454973.9	3737688.3	299.9	3.49	4.00	3.25	YES	
L0007597	0	0.64810E-07	454972.5	3737679.8	300.4	3.49	4.00	3.25	YES	
L0007598	0	0.64810E-07	454971.1	3737671.3	300.9	3.49	4.00	3.25	YES	

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 L0007599         0   0.64810E-07  454969.7 3737662.8   301.4     3.49     4.00
3.25     YES
 L0007600         0   0.64810E-07  454968.4 3737654.4   301.7     3.49     4.00
3.25     YES
 L0007601         0   0.64810E-07  454967.0 3737645.9   301.8     3.49     4.00
3.25     YES
 L0007602         0   0.64810E-07  454963.8 3737638.1   301.9     3.49     4.00
3.25     YES
 L0007603         0   0.64810E-07  454959.3 3737630.8   302.0     3.49     4.00
3.25     YES
 L0007604         0   0.64810E-07  454954.8 3737623.5   302.2     3.49     4.00
3.25     YES
 L0007605         0   0.64810E-07  454950.3 3737616.1   302.6     3.49     4.00
3.25     YES
 L0007606         0   0.64810E-07  454945.8 3737608.8   303.0     3.49     4.00
3.25     YES
 L0007607         0   0.64810E-07  454941.3 3737601.5   303.4     3.49     4.00
3.25     YES
 L0007608         0   0.64810E-07  454936.7 3737594.2   303.8     3.49     4.00
3.25     YES
 L0007609         0   0.64810E-07  454932.2 3737586.9   304.2     3.49     4.00
3.25     YES
 L0007610         0   0.64810E-07  454927.7 3737579.6   304.7     3.49     4.00
3.25     YES
 L0007611         0   0.64810E-07  454923.2 3737572.3   305.2     3.49     4.00
3.25     YES
 L0007612         0   0.64810E-07  454918.7 3737565.0   305.8     3.49     4.00
3.25     YES
 L0007613         0   0.64810E-07  454914.2 3737557.7   306.2     3.49     4.00
3.25     YES
 L0007614         0   0.64810E-07  454909.7 3737550.3   306.5     3.49     4.00
3.25     YES
 L0007615         0   0.64810E-07  454905.0 3737543.1   306.8     3.49     4.00
3.25     YES
 L0007616         0   0.64810E-07  454900.3 3737536.0   307.0     3.49     4.00
3.25     YES
 L0007617         0   0.64810E-07  454895.5 3737528.8   307.5     3.49     4.00
3.25     YES
 L0007618         0   0.64810E-07  454890.8 3737521.6   308.1     3.49     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                          ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
                         ***        15:46:19

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
```

SOURCE ID	NUMBER PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC) VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0007619	0	0.64810E-07	454886.0	3737514.5	308.6	3.49	4.00	3.25	YES
L0007620	0	0.64810E-07	454881.3	3737507.3	309.2	3.49	4.00	3.25	YES
L0007621	0	0.64810E-07	454876.5	3737500.2	309.7	3.49	4.00	3.25	YES
L0007622	0	0.64810E-07	454871.8	3737493.0	310.3	3.49	4.00	3.25	YES
L0007623	0	0.64810E-07	454867.0	3737485.9	310.9	3.49	4.00	3.25	YES
L0007624	0	0.64810E-07	454862.3	3737478.7	311.6	3.49	4.00	3.25	YES
L0007625	0	0.64810E-07	454857.6	3737471.5	312.4	3.49	4.00	3.25	YES
L0007626	0	0.64810E-07	454852.8	3737464.4	313.1	3.49	4.00	3.25	YES
L0007627	0	0.64810E-07	454848.1	3737457.2	313.8	3.49	4.00	3.25	YES
L0007628	0	0.64810E-07	454843.3	3737450.1	314.5	3.49	4.00	3.25	YES
L0007629	0	0.21520E-07	454928.7	3737925.9	291.0	0.00	4.00	3.25	YES
L0007630	0	0.21520E-07	454923.8	3737933.0	291.2	0.00	4.00	3.25	YES
L0007631	0	0.21520E-07	454919.0	3737940.1	291.4	0.00	4.00	3.25	YES
L0007632	0	0.21520E-07	454914.1	3737947.1	291.5	0.00	4.00	3.25	YES
L0007633	0	0.21520E-07	454909.2	3737954.2	291.7	0.00	4.00	3.25	YES
L0007634	0	0.21520E-07	454904.4	3737961.3	291.7	0.00	4.00	3.25	YES
L0007635	0	0.21520E-07	454899.5	3737968.4	291.6	0.00	4.00	3.25	YES
L0007636	0	0.21520E-07	454894.7	3737975.5	291.6	0.00	4.00	3.25	YES
L0007637	0	0.21520E-07	454889.8	3737982.6	291.7	0.00	4.00	3.25	YES
L0007638	0	0.21520E-07	454884.9	3737989.6	291.9	0.00	4.00	3.25	YES

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 L0007639         0   0.21520E-07  454880.1 3737996.7   292.1     0.00     4.00
3.25     YES
 L0007640         0   0.21520E-07  454875.2 3738003.8   292.2     0.00     4.00
3.25     YES
 L0007641         0   0.21520E-07  454870.4 3738010.9   292.1     0.00     4.00
3.25     YES
 L0007642         0   0.21520E-07  454865.5 3738018.0   292.1     0.00     4.00
3.25     YES
 L0007643         0   0.21520E-07  454860.7 3738025.1   292.0     0.00     4.00
3.25     YES
 L0007644         0   0.21520E-07  454855.9 3738032.2   291.9     0.00     4.00
3.25     YES
 L0007645         0   0.21520E-07  454851.0 3738039.3   291.9     0.00     4.00
3.25     YES
 L0007646         0   0.21520E-07  454846.2 3738046.4   291.8     0.00     4.00
3.25     YES
 L0007647         0   0.21520E-07  454841.3 3738053.5   291.7     0.00     4.00
3.25     YES
 L0007648         0   0.21520E-07  454836.5 3738060.6   291.6     0.00     4.00
3.25     YES
 L0007649         0   0.21520E-07  454831.6 3738067.7   291.6     0.00     4.00
3.25     YES
 L0007650         0   0.21520E-07  454826.8 3738074.8   291.5     0.00     4.00
3.25     YES
 L0007651         0   0.21520E-07  454821.9 3738081.9   291.3     0.00     4.00
3.25     YES
 L0007652         0   0.21520E-07  454817.1 3738089.0   291.0     0.00     4.00
3.25     YES
 L0007653         0   0.21520E-07  454812.3 3738096.0   290.6     0.00     4.00
3.25     YES
 L0007654         0   0.21520E-07  454807.4 3738103.1   290.2     0.00     4.00
3.25     YES
 L0007655         0   0.21520E-07  454802.6 3738110.2   289.9     0.00     4.00
3.25     YES
 L0007656         0   0.21520E-07  454797.7 3738117.3   289.6     0.00     4.00
3.25     YES
 L0007657         0   0.21520E-07  454792.9 3738124.4   289.4     0.00     4.00
3.25     YES
 L0007658         0   0.21520E-07  454788.0 3738131.5   289.2     0.00     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                          ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
                         ***        15:46:19

                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***
```

SOURCE ID	NUMBER PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC) VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0007659	0	0.21520E-07	454783.2	3738138.6	288.9	0.00	4.00	3.25	YES
L0007660	0	0.21520E-07	454778.4	3738145.7	288.7	0.00	4.00	3.25	YES
L0007661	0	0.21520E-07	454773.5	3738152.8	288.7	0.00	4.00	3.25	YES
L0007662	0	0.21520E-07	454768.7	3738159.9	288.6	0.00	4.00	3.25	YES
L0007663	0	0.21520E-07	454763.8	3738167.0	288.5	0.00	4.00	3.25	YES
L0007664	0	0.21520E-07	454758.9	3738174.0	288.4	0.00	4.00	3.25	YES
L0007665	0	0.21520E-07	454754.1	3738181.1	288.4	0.00	4.00	3.25	YES
L0007666	0	0.21520E-07	454749.2	3738188.2	288.3	0.00	4.00	3.25	YES
L0007667	0	0.21520E-07	454744.3	3738195.3	288.2	0.00	4.00	3.25	YES
L0007668	0	0.21520E-07	454739.5	3738202.4	288.1	0.00	4.00	3.25	YES
L0007669	0	0.21520E-07	454734.6	3738209.4	288.1	0.00	4.00	3.25	YES
L0007670	0	0.21520E-07	454729.7	3738216.5	288.0	0.00	4.00	3.25	YES
L0007671	0	0.21520E-07	454724.8	3738223.6	287.9	0.00	4.00	3.25	YES
L0007672	0	0.21520E-07	454720.0	3738230.7	287.8	0.00	4.00	3.25	YES
L0007673	0	0.21520E-07	454715.1	3738237.7	287.8	0.00	4.00	3.25	YES
L0007674	0	0.21520E-07	454710.2	3738244.8	287.7	0.00	4.00	3.25	YES
L0007675	0	0.21520E-07	454705.4	3738251.9	287.6	0.00	4.00	3.25	YES
L0007676	0	0.21520E-07	454700.5	3738259.0	287.6	0.00	4.00	3.25	YES
L0007677	0	0.21520E-07	454695.6	3738266.0	287.8	0.00	4.00	3.25	YES
L0007678	0	0.21520E-07	454690.8	3738273.1	288.0	0.00	4.00	3.25	YES

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 L0007679         0   0.21520E-07  454685.9 3738280.2   288.0     0.00     4.00
3.25     YES
 L0007680         0   0.21520E-07  454681.0 3738287.3   288.0     0.00     4.00
3.25     YES
 L0007681         0   0.21520E-07  454676.2 3738294.4   287.9     0.00     4.00
3.25     YES
 L0007682         0   0.21520E-07  454671.3 3738301.4   287.8     0.00     4.00
3.25     YES
 L0007683         0   0.21520E-07  454666.4 3738308.5   287.8     0.00     4.00
3.25     YES
 L0007684         0   0.21520E-07  454661.6 3738315.6   287.9     0.00     4.00
3.25     YES
 L0007685         0   0.21520E-07  454656.7 3738322.7   287.9     0.00     4.00
3.25     YES
 L0007686         0   0.21520E-07  454651.8 3738329.7   287.8     0.00     4.00
3.25     YES
 L0007687         0   0.21520E-07  454646.9 3738336.8   287.7     0.00     4.00
3.25     YES
 L0007688         0   0.21520E-07  454642.1 3738343.9   287.7     0.00     4.00
3.25     YES
 L0007689         0   0.21520E-07  454637.2 3738351.0   287.6     0.00     4.00
3.25     YES
 L0007690         0   0.21520E-07  454632.3 3738358.0   287.5     0.00     4.00
3.25     YES
 L0007691         0   0.21520E-07  454627.5 3738365.1   287.4     0.00     4.00
3.25     YES
 L0007692         0   0.21520E-07  454622.6 3738372.2   287.4     0.00     4.00
3.25     YES
 L0007693         0   0.21520E-07  454617.7 3738379.3   287.3     0.00     4.00
3.25     YES
 L0007694         0   0.21520E-07  454612.8 3738386.3   287.2     0.00     4.00
3.25     YES
 L0007695         0   0.21520E-07  454608.0 3738393.4   287.2     0.00     4.00
3.25     YES
 L0007696         0   0.21520E-07  454603.1 3738400.5   287.1     0.00     4.00
3.25     YES
 L0007697         0   0.21520E-07  454598.2 3738407.5   287.0     0.00     4.00
3.25     YES
 L0007698         0   0.21520E-07  454593.3 3738414.6   286.9     0.00     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                        ***        11/23/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER EMISSION RATE PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC) VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0007699	0	0.21520E-07	454588.4	3738421.7	286.9	0.00	4.00	3.25	YES
L0007700	0	0.21520E-07	454583.5	3738428.7	286.8	0.00	4.00	3.25	YES
L0007701	0	0.21520E-07	454578.6	3738435.8	286.7	0.00	4.00	3.25	YES
L0007702	0	0.21520E-07	454573.8	3738442.9	286.6	0.00	4.00	3.25	YES
L0007703	0	0.21520E-07	454568.9	3738449.9	286.6	0.00	4.00	3.25	YES
L0007704	0	0.21520E-07	454564.0	3738457.0	286.7	0.00	4.00	3.25	YES
L0007705	0	0.21520E-07	454559.1	3738464.1	286.8	0.00	4.00	3.25	YES
L0007706	0	0.21520E-07	454554.2	3738471.1	286.9	0.00	4.00	3.25	YES
L0007707	0	0.21520E-07	454549.3	3738478.2	287.1	0.00	4.00	3.25	YES
L0007708	0	0.21520E-07	454544.4	3738485.3	287.1	0.00	4.00	3.25	YES
L0007709	0	0.21520E-07	454539.6	3738492.3	287.1	0.00	4.00	3.25	YES
L0007710	0	0.21520E-07	454534.7	3738499.4	287.1	0.00	4.00	3.25	YES
L0007711	0	0.21520E-07	454529.8	3738506.4	287.0	0.00	4.00	3.25	YES
L0007712	0	0.21520E-07	454524.9	3738513.5	286.9	0.00	4.00	3.25	YES
L0007713	0	0.21520E-07	454520.0	3738520.6	286.8	0.00	4.00	3.25	YES
L0007714	0	0.21520E-07	454515.1	3738527.6	286.8	0.00	4.00	3.25	YES
L0007715	0	0.21520E-07	454510.2	3738534.7	286.7	0.00	4.00	3.25	YES
L0007716	0	0.21520E-07	454505.4	3738541.8	286.8	0.00	4.00	3.25	YES
L0007717	0	0.21520E-07	454500.5	3738548.8	286.9	0.00	4.00	3.25	YES
L0007718	0	0.21520E-07	454495.6	3738555.9	286.9	0.00	4.00	3.25	YES

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 L0007719         0   0.21520E-07  454490.7 3738563.0   287.0     0.00     4.00
3.25     YES
 L0007720         0   0.21520E-07  454485.9 3738570.1   287.1     0.00     4.00
3.25     YES
 L0007721         0   0.21520E-07  454481.1 3738577.2   287.2     0.00     4.00
3.25     YES
 L0007722         0   0.21520E-07  454476.4 3738584.4   287.2     0.00     4.00
3.25     YES
 L0007723         0   0.21520E-07  454471.6 3738591.5   286.9     0.00     4.00
3.25     YES
 L0007724         0   0.21520E-07  454466.9 3738598.7   286.8     0.00     4.00
3.25     YES
 L0007725         0   0.21520E-07  454462.1 3738605.9   286.7     0.00     4.00
3.25     YES
 L0007726         0   0.21520E-07  454457.4 3738613.0   286.6     0.00     4.00
3.25     YES
 L0007727         0   0.21520E-07  454452.6 3738620.2   286.4     0.00     4.00
3.25     YES
 L0007728         0   0.21520E-07  454447.9 3738627.3   286.0     0.00     4.00
3.25     YES
 L0007729         0   0.21520E-07  454443.1 3738634.5   285.6     0.00     4.00
3.25     YES
 L0007730         0   0.21520E-07  454438.4 3738641.6   285.2     0.00     4.00
3.25     YES
 L0007731         0   0.21520E-07  454433.6 3738648.8   284.9     0.00     4.00
3.25     YES
 L0007732         0   0.21520E-07  454428.9 3738656.0   284.7     0.00     4.00
3.25     YES
 L0007733         0   0.21520E-07  454424.4 3738663.3   284.5     0.00     4.00
3.25     YES
 L0007734         0   0.21520E-07  454420.9 3738671.1   284.2     0.00     4.00
3.25     YES
 L0007735         0   0.21520E-07  454417.3 3738678.9   284.1     0.00     4.00
3.25     YES
 L0007736         0   0.21520E-07  454413.8 3738686.7   284.1     0.00     4.00
3.25     YES
 L0007737         0   0.21520E-07  454410.2 3738694.6   284.0     0.00     4.00
3.25     YES
 L0007738         0   0.21520E-07  454407.0 3738702.5   283.9     0.00     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                        ***        11/23/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE VARY BY
L0007739	0	0.21520E-07	454404.6	3738710.8	283.9	0.00	4.00	3.25	YES
L0007740	0	0.21520E-07	454402.3	3738719.0	284.1	0.00	4.00	3.25	YES
L0007741	0	0.21520E-07	454399.9	3738727.3	284.2	0.00	4.00	3.25	YES
L0007742	0	0.21520E-07	454396.9	3738735.3	284.3	0.00	4.00	3.25	YES
L0007743	0	0.21520E-07	454392.6	3738742.7	284.1	0.00	4.00	3.25	YES
L0007744	0	0.21520E-07	454388.3	3738750.2	283.8	0.00	4.00	3.25	YES
L0007745	0	0.21520E-07	454384.1	3738757.6	283.6	0.00	4.00	3.25	YES
L0007746	0	0.21520E-07	454379.8	3738765.1	283.4	0.00	4.00	3.25	YES
L0007747	0	0.21520E-07	454375.5	3738772.5	283.3	0.00	4.00	3.25	YES
L0007748	0	0.21520E-07	454370.9	3738779.7	283.0	0.00	4.00	3.25	YES
L0007749	0	0.21520E-07	454365.0	3738786.0	282.9	0.00	4.00	3.25	YES
L0007750	0	0.21520E-07	454359.1	3738792.3	282.6	0.00	4.00	3.25	YES
L0007751	0	0.21520E-07	454353.2	3738798.5	282.9	0.00	4.00	3.25	YES
L0007752	0	0.21520E-07	454347.4	3738804.8	283.1	0.00	4.00	3.25	YES
L0007753	0	0.21520E-07	454341.2	3738810.7	283.2	0.00	4.00	3.25	YES
L0007754	0	0.21520E-07	454334.5	3738816.1	283.2	0.00	4.00	3.25	YES
L0007755	0	0.21520E-07	454327.9	3738821.6	282.7	0.00	4.00	3.25	YES
L0007756	0	0.21520E-07	454321.2	3738827.0	281.4	0.00	4.00	3.25	YES
L0007757	0	0.21520E-07	454314.6	3738832.4	280.7	0.00	4.00	3.25	YES
L0007758	0	0.21520E-07	454307.9	3738837.9	280.2	0.00	4.00	3.25	YES

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 L0007759         0   0.21520E-07  454301.3 3738843.3   280.0     0.00     4.00
3.25     YES
 L0007760         0   0.21520E-07  454294.6 3738848.7   280.2     0.00     4.00
3.25     YES
 L0007761         0   0.21520E-07  454288.0 3738854.2   280.1     0.00     4.00
3.25     YES
 L0007762         0   0.21520E-07  454281.3 3738859.6   279.9     0.00     4.00
3.25     YES
 L0007763         0   0.21520E-07  454274.7 3738865.1   279.7     0.00     4.00
3.25     YES
 L0007764         0   0.21520E-07  454268.0 3738870.5   279.6     0.00     4.00
3.25     YES
 L0007765         0   0.21520E-07  454261.4 3738875.9   279.7     0.00     4.00
3.25     YES
 L0007766         0   0.21520E-07  454254.7 3738881.4   279.7     0.00     4.00
3.25     YES
 L0007767         0   0.21520E-07  454247.5 3738886.1   279.7     0.00     4.00
3.25     YES
 L0007768         0   0.21520E-07  454240.2 3738890.5   279.8     0.00     4.00
3.25     YES
 L0007769         0   0.21520E-07  454232.8 3738894.8   279.8     0.00     4.00
3.25     YES
 L0007770         0   0.21520E-07  454225.4 3738899.2   279.8     0.00     4.00
3.25     YES
 L0007771         0   0.21520E-07  454218.0 3738903.6   279.8     0.00     4.00
3.25     YES
 L0007772         0   0.21520E-07  454210.6 3738908.0   280.0     0.00     4.00
3.25     YES
 L0007773         0   0.21520E-07  454203.2 3738912.4   280.0     0.00     4.00
3.25     YES
 L0007774         0   0.21520E-07  454195.8 3738916.8   280.0     0.00     4.00
3.25     YES
 L0007775         0   0.21520E-07  454188.5 3738921.2   279.9     0.00     4.00
3.25     YES
 L0007776         0   0.21520E-07  454181.1 3738925.6   280.0     0.00     4.00
3.25     YES
 L0007777         0   0.21520E-07  454173.7 3738929.9   280.1     0.00     4.00
3.25     YES
 L0007778         0   0.21520E-07  454166.3 3738934.3   280.3     0.00     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                         ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER EMISSION RATE PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE VARY BY
L0007779	0	0.21520E-07	454159.7	3738939.8	280.5	0.00	4.00	3.25	YES
L0007780	0	0.21520E-07	454153.5	3738945.7	280.9	0.00	4.00	3.25	YES
L0007781	0	0.21520E-07	454147.3	3738951.6	280.9	0.00	4.00	3.25	YES
L0007782	0	0.21520E-07	454141.0	3738957.5	281.0	0.00	4.00	3.25	YES
L0007783	0	0.21520E-07	454134.8	3738963.4	281.2	0.00	4.00	3.25	YES
L0007784	0	0.21520E-07	454128.6	3738969.3	281.5	0.00	4.00	3.25	YES
L0007785	0	0.21520E-07	454122.3	3738975.2	281.8	0.00	4.00	3.25	YES
L0007786	0	0.21520E-07	454116.1	3738981.1	282.0	0.00	4.00	3.25	YES
L0007787	0	0.21520E-07	454110.4	3738987.6	282.0	0.00	4.00	3.25	YES
L0007788	0	0.21520E-07	454105.0	3738994.3	282.2	0.00	4.00	3.25	YES
L0007789	0	0.21520E-07	454099.6	3739000.9	282.4	0.00	4.00	3.25	YES
L0007790	0	0.21520E-07	454094.2	3739007.6	282.7	0.00	4.00	3.25	YES
L0007791	0	0.21520E-07	454088.8	3739014.3	282.8	0.00	4.00	3.25	YES
L0007792	0	0.21520E-07	454083.4	3739020.9	282.7	0.00	4.00	3.25	YES
L0007793	0	0.21520E-07	454078.0	3739027.6	282.7	0.00	4.00	3.25	YES
L0007794	0	0.21520E-07	454072.6	3739034.3	282.6	0.00	4.00	3.25	YES
L0007795	0	0.21520E-07	454067.1	3739041.0	282.8	0.00	4.00	3.25	YES
L0007796	0	0.21520E-07	454061.7	3739047.6	282.9	0.00	4.00	3.25	YES
L0007797	0	0.21520E-07	454057.0	3739054.8	283.1	0.00	4.00	3.25	YES
L0007798	0	0.21520E-07	454052.4	3739062.0	283.2	0.00	4.00	3.25	YES

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 L0007799         0   0.21520E-07  454047.7 3739069.3   283.3     0.00     4.00
3.25     YES
 L0007800         0   0.21520E-07  454043.0 3739076.5   283.2     0.00     4.00
3.25     YES
 L0007801         0   0.21520E-07  454038.4 3739083.7   283.1     0.00     4.00
3.25     YES
 L0007802         0   0.21520E-07  454033.7 3739090.9   283.0     0.00     4.00
3.25     YES
 L0007803         0   0.21520E-07  454029.0 3739098.1   282.9     0.00     4.00
3.25     YES
 L0007804         0   0.21520E-07  454024.3 3739105.3   282.9     0.00     4.00
3.25     YES
 L0007805         0   0.21520E-07  454019.7 3739112.5   282.8     0.00     4.00
3.25     YES
 L0007806         0   0.21520E-07  454015.0 3739119.7   282.7     0.00     4.00
3.25     YES
 L0007807         0   0.21520E-07  454010.3 3739126.9   282.6     0.00     4.00
3.25     YES
 L0007808         0   0.21520E-07  454005.7 3739134.1   282.7     0.00     4.00
3.25     YES
 L0007809         0   0.21520E-07  454001.0 3739141.3   282.9     0.00     4.00
3.25     YES
 L0007810         0   0.21520E-07  453996.3 3739148.6   283.1     0.00     4.00
3.25     YES
 L0007811         0   0.21520E-07  453991.7 3739155.8   283.3     0.00     4.00
3.25     YES
 L0007812         0   0.21520E-07  453987.0 3739163.0   283.2     0.00     4.00
3.25     YES
 L0007813         0   0.21520E-07  453982.3 3739170.2   283.1     0.00     4.00
3.25     YES
 L0007814         0   0.21520E-07  453977.6 3739177.4   283.0     0.00     4.00
3.25     YES
 L0007815         0   0.21520E-07  453973.0 3739184.6   282.9     0.00     4.00
3.25     YES
 L0007816         0   0.21520E-07  453968.3 3739191.8   283.1     0.00     4.00
3.25     YES
 L0007817         0   0.21520E-07  453963.6 3739199.0   283.3     0.00     4.00
3.25     YES
 L0007818         0   0.21520E-07  453959.0 3739206.2   283.5     0.00     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                         ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC) VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0007819	0	0.21520E-07	453954.3	3739213.4	283.6	0.00	4.00	3.25	YES
L0007820	0	0.21520E-07	453949.6	3739220.6	283.8	0.00	4.00	3.25	YES
L0007821	0	0.21520E-07	453944.9	3739227.9	284.2	0.00	4.00	3.25	YES
L0007822	0	0.21520E-07	453940.3	3739235.1	284.6	0.00	4.00	3.25	YES
L0007823	0	0.21520E-07	453935.6	3739242.3	285.0	0.00	4.00	3.25	YES
L0007824	0	0.21520E-07	453930.9	3739249.5	285.3	0.00	4.00	3.25	YES
L0007825	0	0.21520E-07	453926.3	3739256.7	285.4	0.00	4.00	3.25	YES
L0007826	0	0.21520E-07	453921.6	3739263.9	285.6	0.00	4.00	3.25	YES
L0007827	0	0.21520E-07	453916.9	3739271.1	285.8	0.00	4.00	3.25	YES
L0007828	0	0.21520E-07	453912.2	3739278.3	285.9	0.00	4.00	3.25	YES
L0007829	0	0.21520E-07	453907.6	3739285.5	286.1	0.00	4.00	3.25	YES
L0007830	0	0.21520E-07	453902.9	3739292.7	286.2	0.00	4.00	3.25	YES
L0007831	0	0.21520E-07	453898.2	3739299.9	286.4	0.00	4.00	3.25	YES
L0007832	0	0.21520E-07	453893.6	3739307.2	286.5	0.00	4.00	3.25	YES
L0007833	0	0.21520E-07	453888.9	3739314.4	286.5	0.00	4.00	3.25	YES
L0007834	0	0.21520E-07	453884.3	3739321.6	286.4	0.00	4.00	3.25	YES
L0007835	0	0.21520E-07	453879.6	3739328.8	286.2	0.00	4.00	3.25	YES
L0007836	0	0.21520E-07	453875.0	3739336.0	286.2	0.00	4.00	3.25	YES
L0007837	0	0.21520E-07	453870.3	3739343.3	286.3	0.00	4.00	3.25	YES
L0007838	0	0.21520E-07	453865.6	3739350.5	286.5	0.00	4.00	3.25	YES

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 L0007839         0   0.21520E-07  453861.0 3739357.7   286.6     0.00     4.00
3.25     YES
 L0007840         0   0.21520E-07  453856.3 3739364.9   286.8     0.00     4.00
3.25     YES
 L0007841         0   0.21520E-07  453851.7 3739372.1   286.9     0.00     4.00
3.25     YES
 L0007842         0   0.21520E-07  453847.0 3739379.4   287.1     0.00     4.00
3.25     YES
 L0007843         0   0.21520E-07  453842.4 3739386.6   287.1     0.00     4.00
3.25     YES
 L0007844         0   0.21520E-07  453837.7 3739393.8   287.0     0.00     4.00
3.25     YES
 L0007845         0   0.21520E-07  453833.1 3739401.0   286.9     0.00     4.00
3.25     YES
 L0007846         0   0.21520E-07  453828.4 3739408.2   286.9     0.00     4.00
3.25     YES
 L0007847         0   0.21520E-07  453823.7 3739415.4   286.9     0.00     4.00
3.25     YES
 L0007848         0   0.21520E-07  453819.1 3739422.7   287.0     0.00     4.00
3.25     YES
 L0007849         0   0.21520E-07  453814.4 3739429.9   287.2     0.00     4.00
3.25     YES
 L0007850         0   0.21520E-07  453809.8 3739437.1   287.2     0.00     4.00
3.25     YES
 L0007851         0   0.21520E-07  453805.1 3739444.3   287.2     0.00     4.00
3.25     YES
 L0007852         0   0.21520E-07  453800.5 3739451.5   287.1     0.00     4.00
3.25     YES
 L0007853         0   0.21520E-07  453795.8 3739458.8   286.9     0.00     4.00
3.25     YES
 L0007854         0   0.21520E-07  453791.2 3739466.0   286.7     0.00     4.00
3.25     YES
 L0007855         0   0.21520E-07  453786.5 3739473.2   286.5     0.00     4.00
3.25     YES
 L0007856         0   0.21520E-07  453781.8 3739480.4   286.4     0.00     4.00
3.25     YES
 L0007857         0   0.21520E-07  453777.2 3739487.6   286.4     0.00     4.00
3.25     YES
 L0007858         0   0.21520E-07  453772.5 3739494.9   286.7     0.00     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                         ***        11/23/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER EMISSION RATE PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE VARY BY
L0007859	0	0.21520E-07	453768.2	3739502.3	287.1	0.00	4.00	3.25	YES
L0007860	0	0.21520E-07	453764.5	3739510.0	287.5	0.00	4.00	3.25	YES
L0007861	0	0.21520E-07	453760.8	3739517.8	287.9	0.00	4.00	3.25	YES
L0007862	0	0.21520E-07	453757.1	3739525.5	287.7	0.00	4.00	3.25	YES
L0007863	0	0.21520E-07	453753.4	3739533.3	287.6	0.00	4.00	3.25	YES
L0007864	0	0.21520E-07	453749.7	3739541.0	287.4	0.00	4.00	3.25	YES
L0007865	0	0.21520E-07	453746.0	3739548.8	287.4	0.00	4.00	3.25	YES
L0007866	0	0.21520E-07	453742.3	3739556.5	287.2	0.00	4.00	3.25	YES
L0007867	0	0.21520E-07	453738.6	3739564.3	287.1	0.00	4.00	3.25	YES
L0007868	0	0.21520E-07	453734.9	3739572.0	287.0	0.00	4.00	3.25	YES
L0007869	0	0.21520E-07	453731.2	3739579.8	286.9	0.00	4.00	3.25	YES
L0007870	0	0.21520E-07	453727.5	3739587.5	287.0	0.00	4.00	3.25	YES
L0007871	0	0.21520E-07	453723.8	3739595.3	287.1	0.00	4.00	3.25	YES
L0007872	0	0.21520E-07	453720.1	3739603.0	287.0	0.00	4.00	3.25	YES
L0007873	0	0.21520E-07	453716.4	3739610.8	286.9	0.00	4.00	3.25	YES
L0007874	0	0.21520E-07	453712.7	3739618.5	286.8	0.00	4.00	3.25	YES
L0007875	0	0.21520E-07	453708.8	3739626.2	286.8	0.00	4.00	3.25	YES
L0007876	0	0.21520E-07	453705.0	3739633.9	286.8	0.00	4.00	3.25	YES
L0007877	0	0.21520E-07	453701.2	3739641.6	286.8	0.00	4.00	3.25	YES
L0007878	0	0.21520E-07	453697.3	3739649.3	286.6	0.00	4.00	3.25	YES

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 L0007879         0   0.21520E-07  453693.5 3739656.9   286.4     0.00     4.00
3.25     YES
 L0007880         0   0.21520E-07  453689.6 3739664.6   286.4     0.00     4.00
3.25     YES
 L0007881         0   0.21520E-07  453685.8 3739672.3   286.4     0.00     4.00
3.25     YES
 L0007882         0   0.21520E-07  453681.7 3739679.9   286.3     0.00     4.00
3.25     YES
 L0007883         0   0.21520E-07  453677.5 3739687.4   286.2     0.00     4.00
3.25     YES
 L0007884         0   0.21520E-07  453673.3 3739694.8   286.0     0.00     4.00
3.25     YES
 L0007885         0   0.21520E-07  453669.1 3739702.3   286.0     0.00     4.00
3.25     YES
 L0007886         0   0.21520E-07  453664.9 3739709.8   286.0     0.00     4.00
3.25     YES
 L0007887         0   0.21520E-07  453660.7 3739717.3   286.0     0.00     4.00
3.25     YES
 L0007888         0   0.21520E-07  453656.5 3739724.8   286.0     0.00     4.00
3.25     YES
 L0007889         0   0.21520E-07  453652.3 3739732.3   285.8     0.00     4.00
3.25     YES
 L0007890         0   0.21520E-07  453648.1 3739739.8   285.5     0.00     4.00
3.25     YES
 L0007891         0   0.21520E-07  453643.9 3739747.3   285.3     0.00     4.00
3.25     YES
 L0007892         0   0.21520E-07  453639.7 3739754.8   285.0     0.00     4.00
3.25     YES
 L0007893         0   0.21520E-07  453635.5 3739762.3   285.0     0.00     4.00
3.25     YES
 L0007894         0   0.21520E-07  453631.3 3739769.8   284.6     0.00     4.00
3.25     YES
 L0007895         0   0.21520E-07  453627.1 3739777.3   284.3     0.00     4.00
3.25     YES
 L0007896         0   0.21520E-07  453622.9 3739784.7   284.1     0.00     4.00
3.25     YES
 L0007897         0   0.21520E-07  453618.7 3739792.2   284.0     0.00     4.00
3.25     YES
 L0007898         0   0.21520E-07  453614.5 3739799.7   284.0     0.00     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                         ***        11/23/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE VARY BY	EMISSION RATE
L0007899	0	0.21520E-07	453610.2	3739807.2	284.0	0.00	4.00	3.25	YES	
L0007900	0	0.21520E-07	453606.0	3739814.7	284.0	0.00	4.00	3.25	YES	
L0007901	0	0.21520E-07	453602.0	3739822.3	283.8	0.00	4.00	3.25	YES	
L0007902	0	0.21520E-07	453598.0	3739829.9	283.5	0.00	4.00	3.25	YES	
L0007903	0	0.21520E-07	453594.0	3739837.5	283.3	0.00	4.00	3.25	YES	
L0007904	0	0.21520E-07	453590.0	3739845.1	283.0	0.00	4.00	3.25	YES	
L0007905	0	0.21520E-07	453586.1	3739852.7	282.9	0.00	4.00	3.25	YES	
L0007906	0	0.21520E-07	453582.1	3739860.4	283.0	0.00	4.00	3.25	YES	
L0007907	0	0.21520E-07	453578.1	3739868.0	283.0	0.00	4.00	3.25	YES	
L0007908	0	0.21520E-07	453574.2	3739875.6	283.0	0.00	4.00	3.25	YES	
L0007909	0	0.21520E-07	453570.2	3739883.2	282.8	0.00	4.00	3.25	YES	
L0007910	0	0.21520E-07	453566.2	3739890.8	282.7	0.00	4.00	3.25	YES	
L0007911	0	0.21520E-07	453562.3	3739898.4	282.7	0.00	4.00	3.25	YES	
L0007912	0	0.21520E-07	453558.3	3739906.1	282.7	0.00	4.00	3.25	YES	
L0007913	0	0.21520E-07	453554.3	3739913.7	282.6	0.00	4.00	3.25	YES	
L0007914	0	0.21520E-07	453550.3	3739921.3	282.5	0.00	4.00	3.25	YES	
L0007915	0	0.21520E-07	453546.4	3739928.9	282.4	0.00	4.00	3.25	YES	
L0007916	0	0.21520E-07	453542.4	3739936.5	282.2	0.00	4.00	3.25	YES	
L0007917	0	0.21520E-07	453538.4	3739944.1	282.3	0.00	4.00	3.25	YES	
L0007918	0	0.21520E-07	453534.5	3739951.8	282.2	0.00	4.00	3.25	YES	

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 L0007919         0   0.21520E-07  453530.5 3739959.4   282.1     0.00     4.00
3.25     YES
 L0007920         0   0.21520E-07  453526.5 3739967.0   282.0     0.00     4.00
3.25     YES
 L0007921         0   0.21520E-07  453522.5 3739974.6   281.7     0.00     4.00
3.25     YES
 L0007922         0   0.21520E-07  453518.6 3739982.2   281.5     0.00     4.00
3.25     YES
 L0007923         0   0.21520E-07  453514.6 3739989.8   281.2     0.00     4.00
3.25     YES
 L0007924         0   0.21520E-07  453510.6 3739997.5   281.0     0.00     4.00
3.25     YES
 L0007925         0   0.21520E-07  453506.7 3740005.1   280.7     0.00     4.00
3.25     YES
 L0007926         0   0.21520E-07  453502.7 3740012.7   280.4     0.00     4.00
3.25     YES
 L0007927         0   0.21520E-07  453498.7 3740020.3   280.2     0.00     4.00
3.25     YES
 L0007928         0   0.21520E-07  453494.7 3740027.9   279.9     0.00     4.00
3.25     YES
 L0007929         0   0.21520E-07  453490.6 3740035.4   279.7     0.00     4.00
3.25     YES
 L0007930         0   0.21520E-07  453486.5 3740043.0   279.6     0.00     4.00
3.25     YES
 L0007931         0   0.21520E-07  453482.4 3740050.6   279.6     0.00     4.00
3.25     YES
 L0007932         0   0.21520E-07  453478.3 3740058.1   279.7     0.00     4.00
3.25     YES
 L0007933         0   0.21520E-07  453474.2 3740065.7   279.7     0.00     4.00
3.25     YES
 L0007934         0   0.21520E-07  453470.1 3740073.2   279.7     0.00     4.00
3.25     YES
 L0007935         0   0.21520E-07  453466.0 3740080.8   279.8     0.00     4.00
3.25     YES
 L0007936         0   0.21520E-07  453461.9 3740088.3   279.8     0.00     4.00
3.25     YES
 L0007937         0   0.21520E-07  453457.9 3740095.9   279.7     0.00     4.00
3.25     YES
 L0007938         0   0.21520E-07  453453.8 3740103.4   279.6     0.00     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                         ***        11/23/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER EMISSION RATE PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE VARY BY
L0007939	0	0.21520E-07	453449.7	3740111.0	279.5	0.00	4.00	3.25	YES
L0007940	0	0.21520E-07	453445.6	3740118.5	279.4	0.00	4.00	3.25	YES
L0007941	0	0.21520E-07	453441.5	3740126.1	279.5	0.00	4.00	3.25	YES
L0007942	0	0.21520E-07	453437.4	3740133.6	279.6	0.00	4.00	3.25	YES
L0007943	0	0.21520E-07	453433.3	3740141.2	279.8	0.00	4.00	3.25	YES
L0007944	0	0.21520E-07	453429.2	3740148.8	279.9	0.00	4.00	3.25	YES
L0007945	0	0.21520E-07	453425.1	3740156.3	279.8	0.00	4.00	3.25	YES
L0007946	0	0.21520E-07	453421.0	3740163.9	279.7	0.00	4.00	3.25	YES
L0007947	0	0.21520E-07	453417.0	3740171.4	279.6	0.00	4.00	3.25	YES
L0007948	0	0.21520E-07	453412.9	3740179.0	279.5	0.00	4.00	3.25	YES
L0007949	0	0.21520E-07	453408.8	3740186.5	279.6	0.00	4.00	3.25	YES
L0007950	0	0.21520E-07	453404.7	3740194.1	279.7	0.00	4.00	3.25	YES
L0007951	0	0.21520E-07	453400.5	3740201.6	279.9	0.00	4.00	3.25	YES
L0007952	0	0.21520E-07	453396.3	3740209.1	280.0	0.00	4.00	3.25	YES
L0007953	0	0.21520E-07	453392.1	3740216.5	279.9	0.00	4.00	3.25	YES
L0007954	0	0.21520E-07	453387.8	3740224.0	279.8	0.00	4.00	3.25	YES
L0007955	0	0.21520E-07	453383.6	3740231.5	279.7	0.00	4.00	3.25	YES
L0007956	0	0.21520E-07	453379.4	3740239.0	279.6	0.00	4.00	3.25	YES
L0007957	0	0.21520E-07	453375.2	3740246.5	279.8	0.00	4.00	3.25	YES
L0007958	0	0.21520E-07	453370.9	3740253.9	279.9	0.00	4.00	3.25	YES

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 L0007959         0   0.21520E-07  453366.7 3740261.4   280.1     0.00     4.00
3.25     YES
 L0007960         0   0.21520E-07  453362.5 3740268.9   280.2     0.00     4.00
3.25     YES
 L0007961         0   0.21520E-07  453358.2 3740276.4   280.0     0.00     4.00
3.25     YES
 L0007962         0   0.21520E-07  453354.0 3740283.8   279.9     0.00     4.00
3.25     YES
 L0007963         0   0.21520E-07  453350.7 3740291.7   279.8     0.00     4.00
3.25     YES
 L0007964         0   0.21520E-07  453347.9 3740299.8   279.7     0.00     4.00
3.25     YES
 L0007965         0   0.21520E-07  453345.1 3740308.0   279.7     0.00     4.00
3.25     YES
 L0007966         0   0.21520E-07  453342.3 3740316.1   279.9     0.00     4.00
3.25     YES
 L0007967         0   0.21520E-07  453339.5 3740324.2   280.0     0.00     4.00
3.25     YES
 L0007968         0   0.21520E-07  453336.8 3740332.3   279.9     0.00     4.00
3.25     YES
 L0007969         0   0.21520E-07  453334.0 3740340.5   279.7     0.00     4.00
3.25     YES
 L0007970         0   0.21520E-07  453331.2 3740348.6   279.5     0.00     4.00
3.25     YES
 L0007971         0   0.21520E-07  453329.6 3740356.9   279.3     0.00     4.00
3.25     YES
 L0007972         0   0.21520E-07  453329.6 3740365.5   279.4     0.00     4.00
3.25     YES
 L0007973         0   0.21520E-07  453329.7 3740374.1   279.5     0.00     4.00
3.25     YES
 L0007974         0   0.21520E-07  453329.7 3740382.7   279.6     0.00     4.00
3.25     YES
 L0007975         0   0.21520E-07  453329.7 3740391.3   279.7     0.00     4.00
3.25     YES
 L0007976         0   0.21520E-07  453329.9 3740399.9   279.7     0.00     4.00
3.25     YES
 L0007977         0   0.21520E-07  453330.0 3740408.5   279.6     0.00     4.00
3.25     YES
 L0007978         0   0.21520E-07  453330.2 3740417.0   279.6     0.00     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                         ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER EMISSION RATE PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC) VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0007979	0	0.21520E-07	453330.3	3740425.6	279.5	0.00	4.00	3.25	YES
L0007980	0	0.21520E-07	453330.5	3740434.2	279.4	0.00	4.00	3.25	YES
L0007981	0	0.21520E-07	453330.6	3740442.8	279.3	0.00	4.00	3.25	YES
L0007982	0	0.21520E-07	453330.8	3740451.4	278.9	0.00	4.00	3.25	YES
L0007983	0	0.21520E-07	453330.9	3740460.0	278.4	0.00	4.00	3.25	YES
L0007984	0	0.21520E-07	453331.1	3740468.6	277.8	0.00	4.00	3.25	YES
L0007985	0	0.21520E-07	453331.2	3740477.2	277.2	0.00	4.00	3.25	YES
L0007986	0	0.21520E-07	453331.4	3740485.8	276.7	0.00	4.00	3.25	YES
L0007987	0	0.21520E-07	453331.3	3740494.3	276.2	0.00	4.00	3.25	YES
L0007988	0	0.21520E-07	453329.4	3740502.7	275.9	0.00	4.00	3.25	YES
L0007989	0	0.21520E-07	453327.5	3740511.1	275.7	0.00	4.00	3.25	YES
L0007990	0	0.21520E-07	453325.6	3740519.4	275.7	0.00	4.00	3.25	YES
L0007991	0	0.21520E-07	453323.7	3740527.8	275.7	0.00	4.00	3.25	YES
L0007992	0	0.21520E-07	453321.8	3740536.2	275.8	0.00	4.00	3.25	YES
L0007993	0	0.21520E-07	453319.9	3740544.6	275.9	0.00	4.00	3.25	YES
L0007994	0	0.21520E-07	453318.0	3740553.0	276.0	0.00	4.00	3.25	YES
L0007995	0	0.21520E-07	453316.1	3740561.3	276.2	0.00	4.00	3.25	YES
L0007996	0	0.21520E-07	453314.2	3740569.7	276.3	0.00	4.00	3.25	YES
L0007997	0	0.21520E-07	453312.3	3740578.1	276.2	0.00	4.00	3.25	YES
L0007998	0	0.21520E-07	453310.4	3740586.5	276.2	0.00	4.00	3.25	YES

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 L0007999         0   0.21520E-07  453308.5 3740594.8   276.2     0.00     4.00
3.25     YES
 L0008000         0   0.21520E-07  453306.6 3740603.2   275.7     0.00     4.00
3.25     YES
 L0008001         0   0.21520E-07  453304.7 3740611.6   275.0     0.00     4.00
3.25     YES
 L0008002         0   0.21520E-07  453302.8 3740620.0   274.4     0.00     4.00
3.25     YES
 L0008003         0   0.21520E-07  453300.9 3740628.3   273.7     0.00     4.00
3.25     YES
 L0008004         0   0.21520E-07  453298.9 3740636.7   273.4     0.00     4.00
3.25     YES
 L0008005         0   0.21520E-07  453297.0 3740645.1   273.0     0.00     4.00
3.25     YES
 L0008006         0   0.21520E-07  453295.1 3740653.5   272.6     0.00     4.00
3.25     YES
 L0008007         0   0.21520E-07  453293.6 3740661.9   272.3     0.00     4.00
3.25     YES
 L0008008         0   0.21520E-07  453292.4 3740670.4   272.0     0.00     4.00
3.25     YES
 L0008009         0   0.21520E-07  453291.2 3740678.9   271.6     0.00     4.00
3.25     YES
 L0008010         0   0.21520E-07  453290.0 3740687.4   271.2     0.00     4.00
3.25     YES
 L0008011         0   0.21520E-07  453288.8 3740695.9   270.8     0.00     4.00
3.25     YES
 L0008012         0   0.21520E-07  453287.6 3740704.4   270.4     0.00     4.00
3.25     YES
 L0008013         0   0.21520E-07  453286.4 3740713.0   270.0     0.00     4.00
3.25     YES
 L0008014         0   0.21520E-07  453285.2 3740721.5   269.4     0.00     4.00
3.25     YES
 L0008015         0   0.21520E-07  453284.0 3740730.0   268.9     0.00     4.00
3.25     YES
 L0008016         0   0.21520E-07  453282.8 3740738.5   268.3     0.00     4.00
3.25     YES
 L0008017         0   0.21520E-07  453281.6 3740747.0   267.8     0.00     4.00
3.25     YES
 L0008018         0   0.21520E-07  453280.4 3740755.5   267.3     0.00     4.00
3.25     YES
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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE VARY BY
L0008019	0	0.21520E-07	453279.2	3740764.0	266.8	0.00	4.00	3.25	YES	
L0008020	0	0.21520E-07	453278.0	3740772.5	266.3	0.00	4.00	3.25	YES	
L0008021	0	0.21520E-07	453276.9	3740781.0	266.2	0.00	4.00	3.25	YES	
L0008022	0	0.21520E-07	453276.3	3740789.5	266.2	0.00	4.00	3.25	YES	
L0008023	0	0.21520E-07	453276.9	3740798.1	266.2	0.00	4.00	3.25	YES	
L0008024	0	0.21520E-07	453277.6	3740806.7	266.2	0.00	4.00	3.25	YES	
L0008025	0	0.21520E-07	453278.2	3740815.2	266.7	0.00	4.00	3.25	YES	
L0008026	0	0.21520E-07	453278.8	3740823.8	267.2	0.00	4.00	3.25	YES	
L0008027	0	0.21520E-07	453279.5	3740832.4	267.8	0.00	4.00	3.25	YES	
L0008028	0	0.21520E-07	453280.1	3740840.9	267.8	0.00	4.00	3.25	YES	
L0008029	0	0.21520E-07	453280.7	3740849.5	267.5	0.00	4.00	3.25	YES	
L0008030	0	0.21520E-07	453281.3	3740858.1	267.2	0.00	4.00	3.25	YES	
L0008031	0	0.21520E-07	453282.0	3740866.6	266.9	0.00	4.00	3.25	YES	
L0008032	0	0.21520E-07	453282.6	3740875.2	267.2	0.00	4.00	3.25	YES	
L0008033	0	0.21520E-07	453283.2	3740883.8	267.4	0.00	4.00	3.25	YES	
L0008034	0	0.21520E-07	453283.9	3740892.3	267.6	0.00	4.00	3.25	YES	
L0008035	0	0.21520E-07	453284.5	3740900.9	267.7	0.00	4.00	3.25	YES	
L0008036	0	0.21520E-07	453285.1	3740909.5	267.6	0.00	4.00	3.25	YES	
L0008037	0	0.21520E-07	453285.8	3740918.0	267.6	0.00	4.00	3.25	YES	
L0008038	0	0.21520E-07	453286.4	3740926.6	267.6	0.00	4.00	3.25	YES	

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 L0008039         0   0.21520E-07  453287.0 3740935.2   267.6     0.00     4.00
3.25     YES
 L0008040         0   0.21520E-07  453287.6 3740943.7   267.6     0.00     4.00
3.25     YES
 L0008041         0   0.21520E-07  453287.6 3740951.4   267.7     0.00     4.00
3.25     YES
 L0008042         0   0.21520E-07  453279.3 3740949.0   268.0     0.00     4.00
3.25     YES
 L0008043         0   0.21520E-07  453271.1 3740946.5   268.1     0.00     4.00
3.25     YES
 L0008044         0   0.21520E-07  453262.9 3740944.1   268.2     0.00     4.00
3.25     YES
 L0008045         0   0.21520E-07  453254.6 3740941.6   268.4     0.00     4.00
3.25     YES
 L0008046         0   0.21520E-07  453246.4 3740939.2   268.6     0.00     4.00
3.25     YES
 L0008047         0   0.21520E-07  453238.2 3740936.7   268.9     0.00     4.00
3.25     YES
 L0008048         0   0.21520E-07  453229.9 3740934.3   269.2     0.00     4.00
3.25     YES
 L0008049         0   0.21520E-07  453221.7 3740931.8   269.6     0.00     4.00
3.25     YES
 L0008050         0   0.21520E-07  453213.5 3740929.4   270.2     0.00     4.00
3.25     YES
 L0008051         0   0.21520E-07  453205.2 3740927.0   270.9     0.00     4.00
3.25     YES
 L0008052         0   0.21520E-07  453197.0 3740924.5   271.5     0.00     4.00
3.25     YES
 L0008053         0   0.21520E-07  453188.8 3740922.1   272.0     0.00     4.00
3.25     YES
 L0008054         0   0.21520E-07  453180.5 3740919.6   272.4     0.00     4.00
3.25     YES
 L0008055         0   0.21520E-07  453172.3 3740917.2   272.8     0.00     4.00
3.25     YES
 L0008056         0   0.21520E-07  453164.1 3740914.7   273.2     0.00     4.00
3.25     YES
 L0008057         0   0.21520E-07  453155.8 3740912.3   273.8     0.00     4.00
3.25     YES
 L0008058         0   0.21520E-07  453147.6 3740909.8   274.5     0.00     4.00
3.25     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                         ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
                          ***        15:46:19

                                   PAGE  15
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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```
               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0008059         0   0.21520E-07  453139.4 3740907.4   275.2     0.00     4.00
3.25     YES
 L0008060         0   0.21520E-07  453131.1 3740904.9   275.9     0.00     4.00
3.25     YES
 L0008061         0   0.21520E-07  453122.9 3740902.5   276.4     0.00     4.00
3.25     YES
 L0008062         0   0.21520E-07  453114.7 3740900.0   277.0     0.00     4.00
3.25     YES
 L0008063         0   0.21520E-07  453106.4 3740897.6   277.6     0.00     4.00
3.25     YES
↑ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                          ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
                         ***       15:46:19

                                   PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                          *** SOURCE IDs DEFINING SOURCE GROUPS
***

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


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 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                        ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
                       ***       15:46:19
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** SOURCE IDs DEFINING SOURCE GROUPS
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 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                         ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
                        ***       15:46:19
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*** SOURCE IDs DEFINING SOURCE GROUPS ***

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

URBAN ID	URBAN POP	SOURCE IDs
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*** SOURCE IDs DEFINED AS URBAN SOURCES
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URBAN ID	URBAN POP	SOURCE IDs

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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

  URBAN ID   URBAN POP   SOURCE IDs
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             L0007867   , L0007868   , L0007869   , L0007870   , L0007871   ,
L0007872   , L0007873   , L0007874   ,

L0007875 , L0007876 , L0007877 , L0007878 , L0007879 ,
L0007880 , L0007881 , L0007882 ,

L0007883 , L0007884 , L0007885 , L0007886 , L0007887 ,
L0007888 , L0007889 , L0007890 ,

L0007891 , L0007892 , L0007893 , L0007894 , L0007895 ,
L0007896 , L0007897 , L0007898 ,

L0007899 , L0007900 , L0007901 , L0007902 , L0007903 ,
L0007904 , L0007905 , L0007906 ,

L0007907 , L0007908 , L0007909 , L0007910 , L0007911 ,
L0007912 , L0007913 , L0007914 ,

L0007915 , L0007916 , L0007917 , L0007918 , L0007919 ,
L0007920 , L0007921 , L0007922 ,

L0007923 , L0007924 , L0007925 , L0007926 , L0007927 ,
L0007928 , L0007929 , L0007930 ,

L0007931 , L0007932 , L0007933 , L0007934 , L0007935 ,
L0007936 , L0007937 , L0007938 ,

L0007939 , L0007940 , L0007941 , L0007942 , L0007943 ,
L0007944 , L0007945 , L0007946 ,

L0007947 , L0007948 , L0007949 , L0007950 , L0007951 ,
L0007952 , L0007953 , L0007954 ,

L0007955 , L0007956 , L0007957 , L0007958 , L0007959 ,
L0007960 , L0007961 , L0007962 ,

L0007963 , L0007964 , L0007965 , L0007966 , L0007967 ,
L0007968 , L0007969 , L0007970 ,

L0007971 , L0007972 , L0007973 , L0007974 , L0007975 ,
L0007976 , L0007977 , L0007978 ,

L0007979 , L0007980 , L0007981 , L0007982 , L0007983 ,
L0007984 , L0007985 , L0007986 ,

L0007987 , L0007988 , L0007989 , L0007990 , L0007991 ,
L0007992 , L0007993 , L0007994 ,

L0007995 , L0007996 , L0007997 , L0007998 , L0007999 ,
L0008000 , L0008001 , L0008002 ,

L0008003 , L0008004 , L0008005 , L0008006 , L0008007 ,
L0008008 , L0008009 , L0008010 ,

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

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

             L0008019   , L0008020   , L0008021   , L0008022   , L0008023   ,
L0008024   , L0008025   , L0008026   ,

             L0008027   , L0008028   , L0008029   , L0008030   , L0008031   ,
L0008032   , L0008033   , L0008034   ,

             L0008035   , L0008036   , L0008037   , L0008038   , L0008039   ,
L0008040   , L0008041   , L0008042   ,

             L0008043   , L0008044   , L0008045   , L0008046   , L0008047   ,
L0008048   , L0008049   , L0008050   ,

             L0008051   , L0008052   , L0008053   , L0008054   , L0008055   ,
L0008056   , L0008057   , L0008058   ,

             L0008059   , L0008060   , L0008061   , L0008062   , L0008063   ,

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

     (452340.4, 3741453.2,   310.1,   1258.0,   0.0);   (454308.0,
3738341.8,   304.1,   1258.0,   0.0);
     (454405.0, 3737981.0,   306.0,   1258.0,   0.0);   (454214.1,

3737481.1,   375.0,   1258.0,   0.0);
     (454397.0, 3737086.4,   341.0,   1258.0,   0.0);   (455204.2,
3736483.0,   342.2,   1258.0,   0.0);
     (454714.6, 3738174.2,   289.1,   1258.0,   0.0);

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

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

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

1.54,   3.09,   5.14,   8.23,
10.80,

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

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

   Surface file:   LakeElsinoreADJU\ELSI_V9_ADJU\ELSI_v9.SFC
                  Met Version:  16216
   Profile file:   LakeElsinoreADJU\ELSI_V9_ADJU\ELSI_v9.PFL

   Surface format: FREE

   Profile format: FREE

   Surface station no.:     3171                  Upper air station no.:     3190
                  Name: UNKNOWN                                    Name: UNKNOWN

                  Year:   2012                                     Year:   2012

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN
ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
 12 01 01   1 01   -1.3  0.065 -9.000 -9.000 -999.   40.     18.2  0.23   2.69
1.00    0.40   78.    9.1  284.2    5.5
 12 01 01   1 02   -4.2  0.092 -9.000 -9.000 -999.   67.     16.0  0.23   2.69
1.00    0.90   69.    9.1  283.8    5.5
 12 01 01   1 03   -4.2  0.092 -9.000 -9.000 -999.   67.     16.0  0.23   2.69
1.00    0.90  286.    9.1  282.5    5.5
 12 01 01   1 04   -4.2  0.092 -9.000 -9.000 -999.   67.     16.0  0.23   2.69
1.00    0.90  348.    9.1  282.5    5.5
 12 01 01   1 05   -1.3  0.066 -9.000 -9.000 -999.   40.     18.2  0.23   2.69
1.00    0.40   17.    9.1  282.0    5.5
 12 01 01   1 06   -4.2  0.092 -9.000 -9.000 -999.   67.     16.0  0.23   2.69
1.00    0.90  161.    9.1  282.0    5.5
 12 01 01   1 07   -1.3  0.066 -9.000 -9.000 -999.   40.     18.2  0.23   2.69
1.00    0.40  273.    9.1  282.0    5.5
 12 01 01   1 08   -3.6  0.091 -9.000 -9.000 -999.   66.     18.3  0.23   2.69
0.54    0.90  113.    9.1  283.8    5.5
 12 01 01   1 09   39.6  0.087  0.358  0.016   40.   61.     -1.4  0.23   2.69
0.33    0.40  336.    9.1  285.9    5.5
 12 01 01   1 10  110.7  0.206  0.740  0.007  127.  225.     -6.9  0.23   2.69
0.25    1.30  158.    9.1  291.4    5.5
 12 01 01   1 11  161.7  0.105  1.203  0.005  374.   87.     -1.0  0.23   2.69
0.23    0.40   33.    9.1  297.0    5.5
 12 01 01   1 12  185.5  0.271  1.535  0.005  676.  339.     -9.3  0.23   2.69
0.22    1.80  313.    9.1  298.8    5.5
 12 01 01   1 13  183.9  0.219  1.828  0.005 1154.  247.     -4.9  0.23   2.69
0.22    1.30  250.    9.1  300.4    5.5
 12 01 01   1 14  156.6  0.266  1.869  0.005 1446.  330.    -10.4  0.23   2.69
```

```
0.23    1.80  217.    9.1  301.4    5.5
 12 01 01   1 15  104.7  0.256  1.677  0.005 1562.  311.    -13.8  0.23   2.69
0.27    1.80  248.    9.1  302.0    5.5
 12 01 01   1 16   32.7  0.319  1.147  0.005 1596.  433.    -85.9  0.23   2.69
0.36    2.70  235.    9.1  302.0    5.5
 12 01 01   1 17  -15.5  0.190 -9.000 -9.000 -999.  208.     39.6  0.23   2.69
0.63    1.80   46.    9.1  299.2    5.5
 12 01 01   1 18   -4.1  0.092 -9.000 -9.000 -999.   73.     16.2  0.23   2.69
1.00    0.90  107.    9.1  294.9    5.5
 12 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.23   2.69
1.00  999.00  999.   -9.0  292.5    5.5
 12 01 01   1 20   -4.2  0.092 -9.000 -9.000 -999.   67.     16.1  0.23   2.69
1.00    0.90  323.    9.1  290.4    5.5
 12 01 01   1 21   -8.8  0.133 -9.000 -9.000 -999.  116.     23.2  0.23   2.69
1.00    1.30   34.    9.1  287.5    5.5
 12 01 01   1 22   -1.3  0.065 -9.000 -9.000 -999.   41.     18.1  0.23   2.69
1.00    0.40  359.    9.1  286.4    5.5
 12 01 01   1 23   -1.3  0.065 -9.000 -9.000 -999.   40.     18.1  0.23   2.69
1.00    0.40  351.    9.1  285.4    5.5
 12 01 01   1 24   -4.2  0.092 -9.000 -9.000 -999.   67.     16.0  0.23   2.69
1.00    0.90   11.    9.1  284.9    5.5


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 12 01 01 01    5.5 0 -999.  -99.00   284.3   99.0  -99.00  -99.00
 12 01 01 01    9.1 1   78.    0.40  -999.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
↑ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                          ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
                         ***        15:46:19

                                    PAGE  27
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                    INCLUDING SOURCE(S):     L0007539    , L0007540
 , L0007541    , L0007542    , L0007543    ,
                   L0007544    , L0007545    , L0007546    , L0007547    , L0007548
 , L0007549    , L0007550    , L0007551    ,
                   L0007552    , L0007553    , L0007554    , L0007555    , L0007556
 , L0007557    , L0007558    , L0007559    ,
                   L0007560    , L0007561    , L0007562    , L0007563    , L0007564
 , L0007565    , L0007566    ,  . . .      ,

                                                 *** DISCRETE CARTESIAN RECEPTOR POINTS
***
```

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
452340.40	3741453.19	0.00001	454307.97	3738341.81	0.00005
454405.04	3737981.04	0.00005	454214.14	3737481.14	0.00001
454396.95	3737086.40	0.00001	455204.23	3736482.96	0.00001
454714.65	3738174.23	0.00024			

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

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

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	NETWORK OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00024	AT (454714.65, 3738174.23, 289.12, 1258.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.00005	AT (454307.97, 3738341.81, 304.13, 1258.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.00005	AT (454405.04, 3737981.04, 306.00, 1258.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.00001	AT (455204.23, 3736482.96, 342.24, 1258.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.00001	AT (454396.95, 3737086.40, 340.98, 1258.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.00001	AT (454214.14, 3737481.14, 374.97, 1258.00, 0.00)	DC	

```
          7TH HIGHEST VALUE IS       0.00001 AT (  452340.40,  3741453.19,
310.08,  1258.00,    0.00)  DC
          8TH HIGHEST VALUE IS       0.00000 AT (       0.00,        0.00,
0.00,     0.00,    0.00)
          9TH HIGHEST VALUE IS       0.00000 AT (       0.00,        0.00,
0.00,     0.00,    0.00)
         10TH HIGHEST VALUE IS       0.00000 AT (       0.00,        0.00,
0.00,     0.00,    0.00)


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\13627 HRA\13627
HRA.isc                          ***        11/23/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        15:46:19

                                  PAGE  29
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of         1763 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          884 Calm Hours Identified

 A Total of          879 Missing Hours Identified (  2.00 Percent)


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


    ********   WARNING MESSAGES   ********
 ME W186    1213       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
      0.50
 ME W187    1213       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


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

AVERAGE EMISSION FACTOR
RIVERSIDE COUNTY 2022

Speed	LHD1	MHD	HHD
0	0	0	0.01394
5	0	0	0.04031
25	0	0	0.01700

Speed	**Weighted Average Emissions**
0	**0.01394**
5	**0.04031**
25	**0.01700**

Emission Rates - 2022 Emission Factors

Truck Emission Rates						
Source	Trucks Per Day	VMT [a] (miles/day)	Truck Emission Rate [b] (grams/mile)	Truck Emission Rate [b] (grams/idle-hour)	Daily Truck Emissions [c] (grams/day)	Modeled Emission Rates (g/second)
On-Site Idling	41			0.0139	0.14	1.654E-06
On-Site Travel	82	10.55	0.0403		0.43	4.923E-06
Off-Site Travel 75% (I-15/Temescal)	62	19.44	0.0170		0.33	3.824E-06
Off-Site Travel 25% (I-15/Weirick)	21	47.59	0.0170		0.81	9.363E-06

[a] Vehicle miles traveled are for modeled truck route only.

[b] Emission rates determined using EMFAC 2017. Idle emission rates are expressed in grams per idle hour rather than grams per mile.

[c] This column includes the total truck travel and truck idle emissions. For idle emissions this column includes emissions based on the assumption that each truck idles for 15 minutes. Additionally, this colum includes idling from TRUs accessing the Project, it is assumed that TRUs would idle for up to 30 minutes.

calendar_y	season_m	sub_area	vehicle_class	fuel	temperatu	relative_h	process	speed_tim	pollutant	emission_rate
2022	Annual	Riverside (	HHDT	Dsl	60	70	RUNEX	5	PM10	0.043461
2022	Annual	Riverside (	HHDT	Dsl	60	70	RUNEX	25	PM10	0.018326
2022	Annual	Riverside (	LHDT1	Dsl	60	70	RUNEX	5	PM10	0.076718
2022	Annual	Riverside (	LHDT1	Dsl	60	70	RUNEX	25	PM10	0.027515
2022	Annual	Riverside (	MHDT	Dsl	60	70	RUNEX	5	PM10	0.070223
2022	Annual	Riverside (	MHDT	Dsl	60	70	RUNEX	25	PM10	0.035704
2022	Annual	Riverside (	HHDT	Dsl			IDLEX		PM10	0.015028
2022	Annual	Riverside (	LHDT1	Dsl			IDLEX		PM10	0.78701
2022	Annual	Riverside (	MHDT	Dsl			IDLEX		PM10	0.147006

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: County
Region: Riverside
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for VMT, trips/year for Trips, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population
Riverside	2022	HHDT	Aggregate	Aggregate	Gasoline	7.255052
Riverside	2022	HHDT	Aggregate	Aggregate	Diesel	27819.82
Riverside	2022	HHDT	Aggregate	Aggregate	Natural Ga	316.9854
Riverside	2022	LHDT1	Aggregate	Aggregate	Gasoline	20620.88
Riverside	2022	LHDT1	Aggregate	Aggregate	Diesel	20161.77
Riverside	2022	MHDT	Aggregate	Aggregate	Gasoline	2027.159
Riverside	2022	MHDT	Aggregate	Aggregate	Diesel	15610.04

HHDT% GAS/NG	0.011521
HHDT% DSL	0.988479
LHDT1% GAS	0.505629
LHDT1% DSL	0.494371
MHDT% GAS	0.114937
MHDT% DSL	0.885063

APPENDIX 2.2:

RISK CALCULATIONS

Table 1
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
-0.25 to 0 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00005	5.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	1.7E-08	5.5E-10	5.0E+00	1.4E-03	1.0E-05							
TOTAL								5.5E-10			1.0E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	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)	0.25
inhalation rate (L/kg-day))	361
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.85
age sensitivity factor (age third trimester	10

Table 2
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
0-2 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00005	5.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	5.2E-08	1.3E-08	5.0E+00	1.4E-03	1.0E-05							
TOTAL								1.3E-08			1.0E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	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)	2
inhalation rate (L/kg-day))	1090
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.85
age sensitivity factor (0 to 2 years old)	10

Table 3
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
2-16 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00005	5.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	2.7E-08	1.2E-08	5.0E+00	1.4E-03	1.0E-05							
TOTAL								1.2E-08			1.0E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	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)	14
inhalation rate (L/kg-day))	572
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.72
age sensitivity factor (ages 2 to 16 years	3

Table 4
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
16-30 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00005	5.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	1.3E-08	1.9E-09	5.0E+00	1.4E-03	1.0E-05							
TOTAL								1.9E-09			1.0E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
								0.00										

** 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)	14
inhalation rate (L/kg-day))	261
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.73
age sensitivity factor (ages 16 to 30 years old)	1

Total Risk for All Age Bins (per million) 0.03

Table 5
Quantification of Carcinogenic Risks and Noncarcinogenic Risks
25-Year Worker Exposure Scenario

	Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**									
						URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
		(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
1	Diesel Particulates	2.40E-04	2.40E-07	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	3.8E-08	1.4E-08	5.0E+00	1.4E-03	4.8E-05							
	TOTAL								2.5E-08			8.4E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
									0.02										

** 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)	250
exposure duration (years)	25
inhalation rate (L/kg-day))	230
inhalation absorption factor	1
averaging time (years)	70