URBAN CROSSROADS

5355 East Airport Drive
MOBILE SOURCE HEALTH RISK ASSESSMENT
CITY OF ONTARIO

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AUGUST 30, 2022

14539-03 HRA Report

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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
MEIW	Maximally Exposed Individual Worker
MHD	Medium Heavy-Duty
NAD	North American Datum
OEHHA	Office of Environmental Health Hazard Assessment
PM10	Particulate Matter 10 microns in diameter or less
Project	5355 East Airport Drive
REL	Reference Exposure Level
RM	Recommended Measures
SCAQMD	South Coast Air Quality Management District
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TA	Traffic 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 emissions health risk impacts associated with the development of the proposed Project. More specifically, this report evaluates potential health risk impacts that could result from exposure to Toxic Air Contaminants (TACs), in this case, diesel particulate matter (DPM) generated by heavy-duty diesel trucks accessing the site. This section summarizes the significance criteria and Project health risks.

The results of the health risk assessment from Project-generated DPM emissions are provided in Table ES-1, ES-2, and ES-3, presented subsequently.

CONSTRUCTION IMPACTS

The land use with the greatest potential exposure to Project construction-source DPM emissions is Location R6 which is located approximately 8,840 feet northwest of the Project site at an existing residence located at 11210 Fourth Street. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R6 is placed at the building façade facing the Project site. At the Maximally Exposed Individual Resident (MEIR), the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at <0.01 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

OPERATIONAL IMPACTS

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R6 which is located approximately 8,840 feet northwest of the Project site at an existing residence located at 11210 Fourth Street. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R6 is placed at the building façade facing the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at <0.01 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, 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 from the Project site than the MEIR analyzed herein, and TACs 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. The nearest modeled receptors are illustrated on Exhibit 2-D.

Worker Exposure Scenario[1]*:*

The worker receptor land use with the greatest potential exposure to Project operational-source DPM emissions is Location R5, which represents the adjacent potential worker receptor approximately 58 feet east of the Project site. At the Maximally Exposed Individual Worker (MEIW), the maximum incremental cancer risk impact is 0.25 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 <0.01, 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 analyzed 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 are illustrated on Exhibit 2-D.

School Child Exposure Scenario:

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 California Air Resources Board (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).

The 1,000-foot evaluation distance is supported by research-based findings concerning TAC emission dispersion rates from roadways and large sources showing that emissions diminish substantially between 500 and 1,000 feet from emission sources.

A one-quarter mile radius, or 1,320 feet, is commonly utilized for identifying sensitive receptors, such as schools, that may be impacted by a proposed project. This radius is more robust than, and therefore provides a more health protective scenario for evaluation than the 1,000-foot impact radius identified above.

There are no schools within ¼ mile of the Project site. The nearest school is Chaparral Elementary School, which is located approximately 11,200 feet southeast of the Project site. Because there is no reasonable potential that TAC emissions would cause significant health impacts at distances of more than ¼ mile from the air pollution source, there would be no significant impacts that would occur to any schools in the vicinity of the Project.

CONSTRUCTION AND OPERATIONAL IMPACTS

The land use with the greatest potential increased cancer risk due to exposure to Project construction-source and operational-source DPM emissions is Location R6. As shown in Table ES-3, at this location, the maximum incremental cancer risk attributable to Project construction and

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1 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.

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operational DPM source emissions is estimated at <0.01 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and operational activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

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

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
0.96 Year Exposure	Maximum Exposed Sensitive Receptor	<0.01	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO

TABLE ES-2: SUMMARY OF OPERATIONAL 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	<0.01	10	NO
25 Year Exposure	Maximum Exposed Worker Receptor	0.25	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO
Annual Average	Maximum Exposed Worker Receptor	≤0.01	1.0	NO

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TABLE ES-3: SUMMARY OF CONSTRUCTION AND OPERATIONAL 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	<0.01	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO

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1   INTRODUCTION

The South Coast Air Quality Management District (SCAQMD) typically issues a comment letter on the Notice of Preparation of a CEQA Document. Per the SCAQMD's typical comment letter, if a proposed Project is expected to generate/attract diesel trucks, which emit diesel particulate matter (DPM) or other Toxic Air Contaminants (TACs), preparation of a HRA is necessary. This document serves to meet the SCAQMD's request for preparation of an HRA. This 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 United States Environmental Protection Agency (U.S. EPA), California EPA 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 TAC exposure from a project such as the proposed Project. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulatively considerable 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 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. In this HRA, non-carcinogenic exposures of less than 1.0 are considered less-than-significant. Both the cancer risk and non-carcinogenic risk thresholds are applied to the nearest sensitive receptors below.

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1.1   SITE LOCATION

The proposed Project is located at 5355 East Airport Drive in the City of Ontario as shown on Exhibit 1-A. The Project is located approximately 2.7 miles east of the Ontario International Airport (ONT).

1.2   PROJECT DESCRIPTION

The Project is proposed to consist of a single 270,337-square-feet (sf) industrial building. This analysis assumes up to 27,034-sf high-cube cold storage use (10% of the total industrial building sf) and 243,303-sf of warehouse use (90% of total industrial building). The site plan for the proposed Project is shown on Exhibit 1-B. The Project is anticipated to be developed within a single phase with an Opening Year of 2024. Per the *5355 East Airport Drive Vehicle Miles Traveled Analysis* prepared by Urban Crossroads, Inc., the proposed Project is expected to generate approximately 476 total trips per day (238 vehicles inbound + 238 vehicles outbound) which include 308 total passenger vehicle trips per day (154 passenger vehicles inbound + 154 passenger vehicles outbound) and 168 total truck trips per day (84 trucks inbound + 84 trucks outbound) (4).

EXHIBIT 1-A: LOCATION MAP

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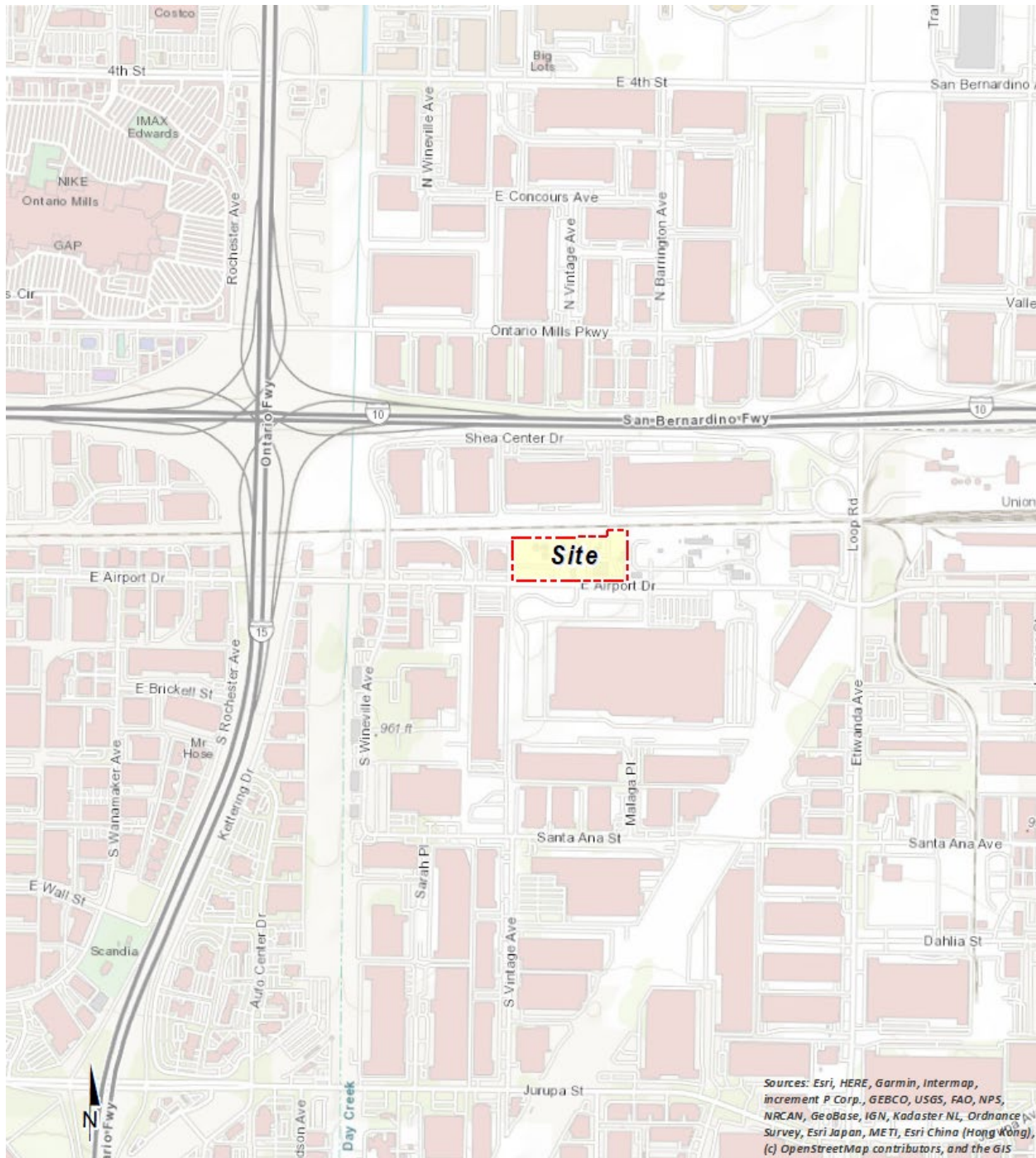
EXHIBIT 1-B: SITE PLAN
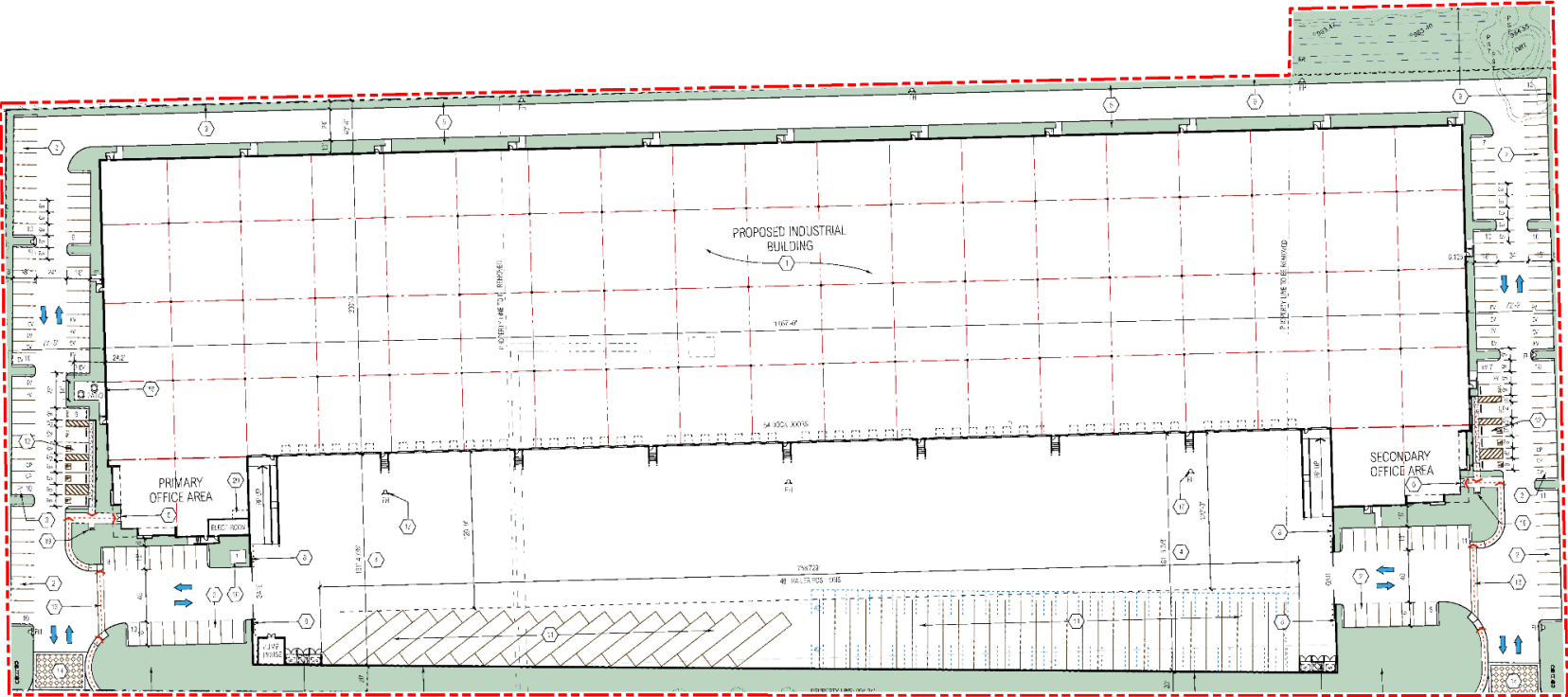
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2   BACKGROUND

2.1   Background on Recommended Methodology

This HRA is based on SCAQMD guidelines to produce conservative estimates of human health 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 because it represents breathing rates that are high for the human body (95% higher than the average population).

- The emissions derived assume that every truck accessing the Project site will idle for 15 minutes under the unmitigated scenario, and this is an overestimation of actual idling times and thus conservative.[2] CARB'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   Construction Health Risk Assessment

2.2.1   Emissions Calculations

The emissions calculations for the construction HRA component are based on an assumed mix of construction equipment and hauling activity as presented in the *5355 East Airport Drive Air Quality Impact Analysis* ("technical study") prepared by Urban Crossroads, Inc. (5)

Construction related DPM emissions are expected to occur primarily as a function of heavy-duty construction equipment that would be operating on-site.

As discussed in the technical study, the Project would result in approximately 250 total working-days of construction activity. The construction duration by phase is shown on Table 2-1. A detailed summary of construction equipment assumptions by phase is provided at Table 2-2. The CalEEMod emissions outputs are presented in Appendix 2.1. The modeled emission sources for construction activity are illustrated on Exhibit 2-A.

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[2]   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.

TABLE 2-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Demolition/Crushing	05/02/2023	07/24/2023	60
Site Preparation	07/25/2023	09/04/2023	30
Grading	07/25/2023	09/04/2023	30
Building Construction	09/05/2023	04/15/2024	160
Paving	02/13/2024	04/15/2024	45
Architectural Coating/Landscaping	03/05/2024	04/15/2024	30

TABLE 2-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Amount	Hours Per Day
Demolition/Crushing	Rubber Tired Dozers	2	8
	Excavators	3	8
	Concrete/Industrial Saws	1	8
	Crushing/Proc. Equipment[2]	1	8
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Graders	1	8
	Excavators	2	8
	Scrapers	2	8
	Rubber Tired Dozers	1	8
	Crawler Tractors	2	8
Building Construction	Forklifts	5	8
	Generator Sets	2	8
	Cranes	2	8
	Welders	2	8
	Crawler Tractors	5	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

EXHIBIT 2-A: MODELED CONSTRUCTION EMISSION SOURCES

LEGEND:

▨ Construction Activity

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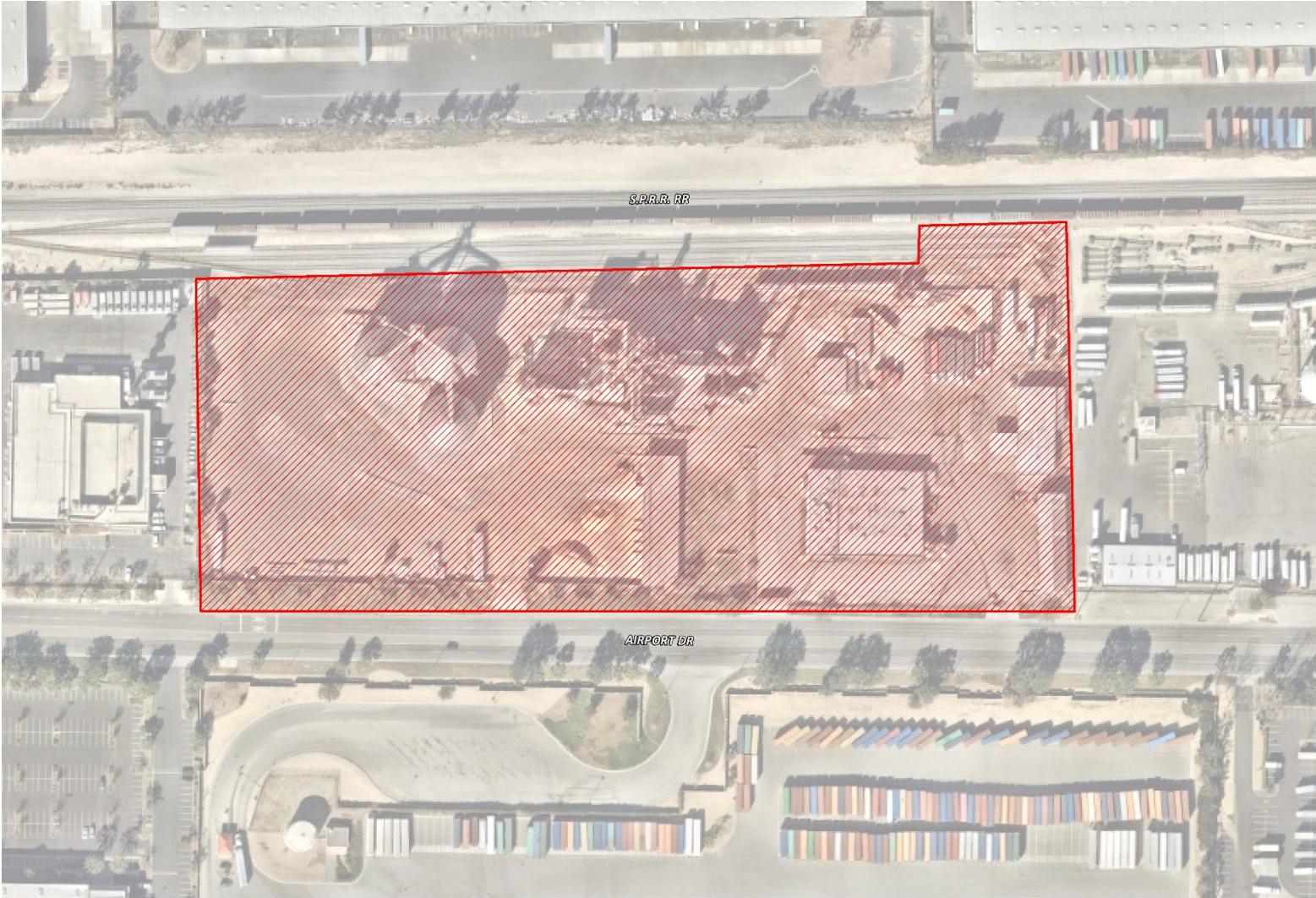
2.3   OPERATIONAL HEALTH RISK ASSESSMENT

2.3.1   ON-SITE AND OFF-SITE TRUCK ACTIVITY

Vehicle DPM emissions were calculated using emission factors for particulate matter less than 10μm in diameter (PM_{10}) generated with the 2021 version of the EMission FACtor model (EMFAC) developed by the CARB. EMFAC 2021 is a mathematical model that CARB 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 2021, 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 2021. Emission factors calculated using EMFAC 2021 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 2021 in EMFAC Mode for vehicles in the San Bernardino 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. 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 2-3. As a conservative measure, a 2024 EMFAC 2021 run was conducted and a static 2024 emissions factor data set was used for the entire duration of analysis herein (e.g., 30 years). Use of 2024 emission factors would overstate potential impacts since this approach assumes that emission factors remain "static" and do not change over time due to fleet turnover or cleaner technology with lower emissions that would be incorporated into vehicles after 2024. Additionally, based on EMFAC 2021, Light-Heavy-Duty Trucks are comprised of 51.2% diesel, Medium-Heavy-Duty Trucks are comprised of 91.1% diesel, and Heavy-Heavy-Duty Trucks are comprised of 85.2% diesel. Trucks fueled by diesel are accounted for by these percentages accordingly in the emissions factor generation. Appendix 2.2 includes additional details on the emissions estimates from EMFAC.

The vehicle DPM exhaust emissions were calculated for running exhaust emissions. The running exhaust emissions were calculated by applying the running exhaust PM_{10} 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 (7):

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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 assumed idle time (15 minutes). The following equation was used to estimate the on-site vehicle idling emissions for each of the different vehicle classes (7):

Emissions$_{idle}$ (g/s) = EF$_{idle}$ (g/hr) * Number of Trips (trips/day) * Idling Time (min/trip) *

60 minutes   per hour / seconds per day

Where:

Emissions$_{idle}$ (g/s): Vehicle emissions during idling;

EF$_{idle}$(g/s): EMFAC idle exhaust PM$_{10}$ emission factor.

TABLE 2-3: 2024 WEIGHTED AVERAGE DPM EMISSIONS FACTORS

Speed	Weighted Average
0 (idling)	0.08568 (g/idle-hr)
5	0.02107 (g/s)
25	0.00889 (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 2.3. 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 2-4. The modeled emission sources are illustrated on Exhibit 2-B for on-site sources and Exhibit 2-C for off-site sources. The modeling domain is limited to the Project's primary truck route and includes off-site sources in the study area for more than ¾ mile. This modeling domain is more inclusive and conservative than using only a ¼ mile modeling domain which is the distance supported by several reputable studies which conclude that the greatest potential risks occur within a ¼ mile of the primary source of emissions (1) (in the case of the Project, the primary source of emissions is the on-site idling and on-site travel).

EXHIBIT 2-B: MODELED ON-SITE EMISSION SOURCES

LEGEND:

N
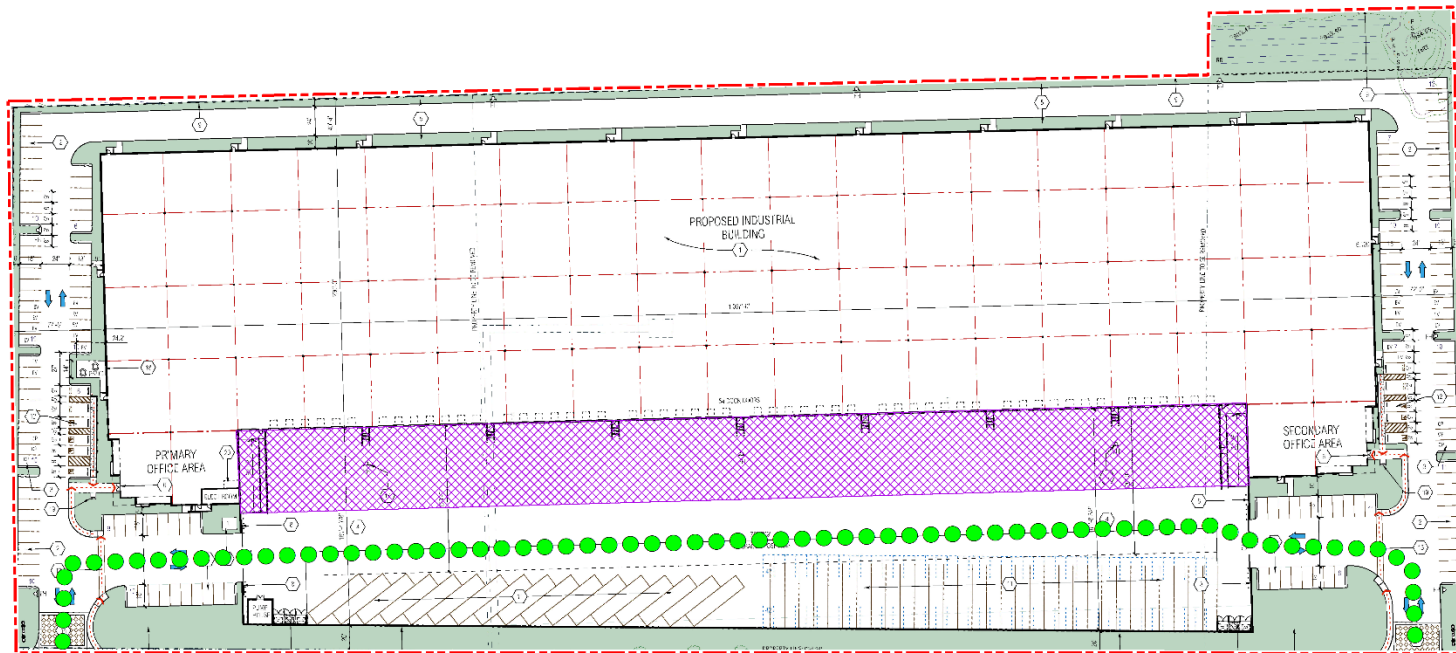
- Site Boundary
- Loading Dock Activity
- Truck Movements

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EXHIBIT 2-C: MODELED OFF-SITE EMISSION SOURCES
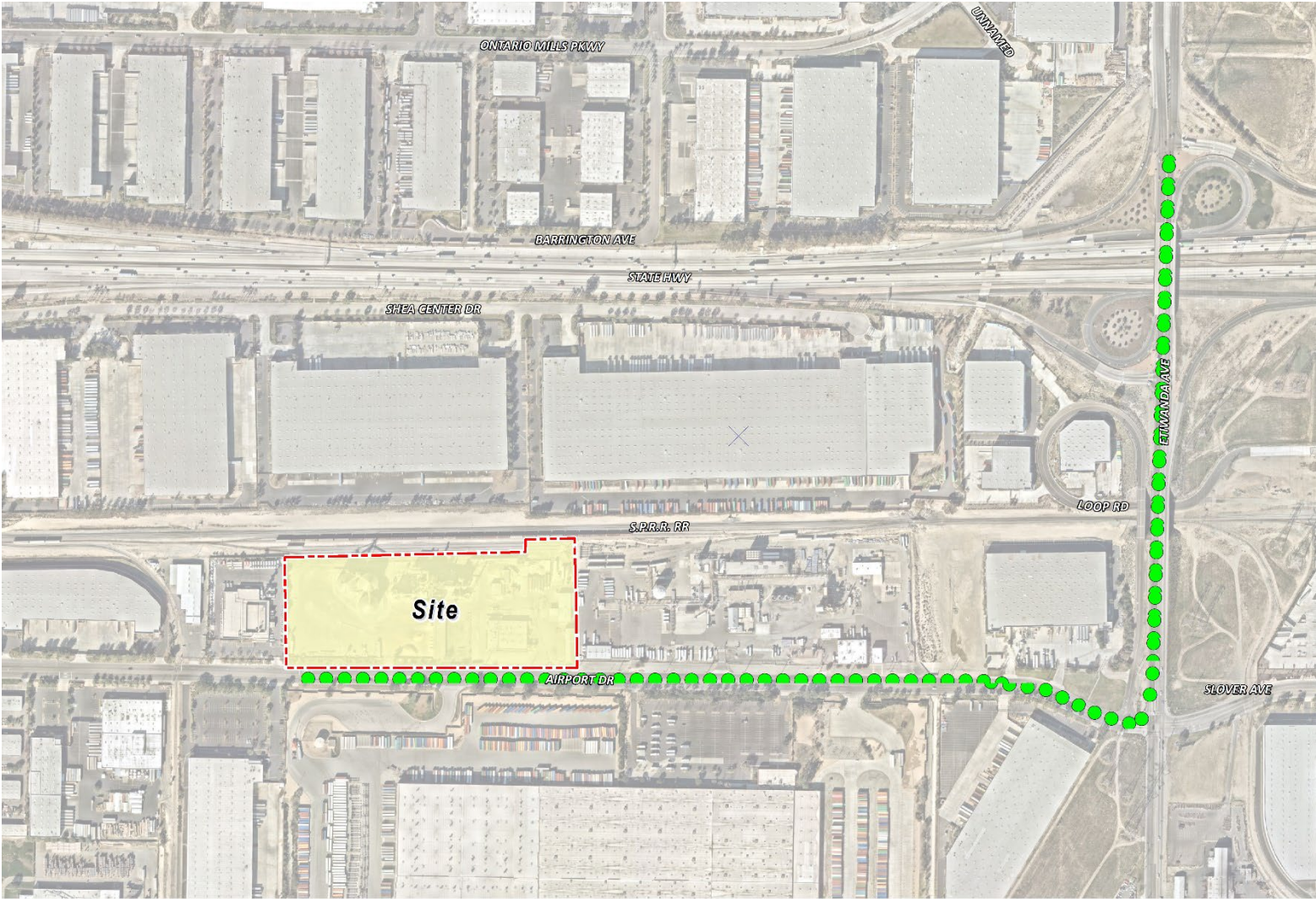
TABLE 2-4: DPM EMISSIONS FROM PROJECT TRUCKS (2024 ANALYSIS YEAR)

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	84			0.0857	3.90	4.517E-05
On-Site Travel	168	41.19	0.0211		1.28	1.482E-05
Off-Site Travel - E. Airport Dr./S. Etiwanda Ave. 100% Inbound/Outbound	168	193.05	0.0089		2.10	2.434E-05

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

[b] Emission rates determined using EMFAC 2021. 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.

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On-site truck idling was estimated to occur as trucks enter and travel through the Project site. Although the Project's diesel-fueled truck and equipment operators will be required by State law to comply with CARB's idling limit of 5 minutes, SCAQMD recommends that the on-site idling emissions be calculated assuming 15 minutes of truck idling (8), 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 calculates truck idling at 15 minutes, consistent with SCAQMD's recommendation.

As summarized in the *5355 East Airport Drive Traffic Analysis*, the proposed Project is expected to generate a total of approximately 476 trip-ends per day with 168 truck trip-ends per day (in actual vehicles) (4).

2.3   EXPOSURE QUANTIFICATION

The analysis herein has been conducted in accordance with the guidelines in the <u>Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis </u>(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 10.2.1) 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 21112 (9).

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-recommended model parameters are presented in Table 2-5 (10). The model requires additional input parameters including emission data and local meteorology. Meteorological data from the SCAQMD's Ontario Airport monitoring station was used to represent local weather conditions and prevailing winds (10).

TABLE 2-5: AERMOD MODEL PARAMETERS

Dispersion Coefficient (Urban/Rural)	Urban (Population 2,035,210)
Terrain (Flat/Elevated)	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 site boundaries, each volume source location, and receptor locations in the Project site's vicinity. The AERMOD dispersion model summary output files for the

proposed Project are presented in Appendix 2.3. Modeled sensitive receptors were placed at residential and non-residential locations.

Receptors may be placed at applicable structure locations for residential and worker property and not necessarily the boundaries of the properties containing these uses because the human receptors (residents and workers) spend a majority of their time at the residence or in the workplace's building, and not on the property line. 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 residents and workers over a period of 30 or 25 years of exposure, respectively. Notwithstanding, as a conservative measure, receptors were placed at either the outdoor living area or the building façade, whichever is closer to the Project site.

For purposes of this HRA, receptors include both residential and non-residential (worker) land uses in the vicinity of the Project. These receptors are included in the HRA since residents and workers may be exposed at these locations over a long-term duration of 30 and 25 years, respectively. This methodology is consistent with SCAQMD and the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA) recommended guidance.

Any impacts to residents or workers located further away from the Project site than the modeled residential and workers would have a lesser impact than what has already been disclosed in the HRA at the MEIR and MEIW because concentrations dissipate with distance.

Consistent with SCAQMD modeling guidance, all receptors were set to existing elevation height so that only ground-level concentrations are analyzed (11). 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 (12).

Discrete variants for daily breathing rates, exposure frequency, and exposure duration were obtained from relevant distribution profiles presented in the 2015 OEHHA Guidelines. Tables 2-6 through 2-8 summarize the Exposure Parameters for Residents and Workers based on 2015 OEHHA Guidelines. Appendix 2.4 includes the detailed risk calculation.

TABLE 2-6: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (CONSTRUCTION ACTIVITY)

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 to 2	1,090	10	0.96	1.0	260	8

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TABLE 2-7: 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	1,090	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 2-8: 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

2.4   CARCINOGENIC CHEMICAL RISK

The SCAQMD <u>CEQA Air Quality Handbook</u> (1993) states that TAC emissions 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 <u>Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis</u> (2), for purposes of this analysis, 10 in one million is used as the cancer risk threshold for the proposed 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.

Guidance from CARB and 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 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.

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

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 x 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 $\mu g/m^3$ (13).

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.

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2.6   POTENTIAL PROJECT-RELATED DPM SOURCE CANCER AND NON-CANCER RISKS

CONSTRUCTION IMPACTS

The land use with the greatest potential exposure to Project construction-source DPM emissions is Location R6 which is located approximately 8,840 feet northwest of the Project site at an existing residence located at 11210 Fourth Street. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R6 is placed at the building façade facing the Project site. At the Maximally Exposed Individual Resident (MEIR), the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at <0.01 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

OPERATIONAL IMPACTS

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R6 which is located approximately 8,840 feet northwest of the Project site at an existing residence located at 11210 Fourth Street. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R6 is placed at the building façade facing the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at <0.01 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, 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 from the Project site than the MEIR analyzed herein, and TACs 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. The nearest modeled receptors are illustrated on Exhibit 2-D.

Worker Exposure Scenario[3]:

The worker receptor land use with the greatest potential exposure to Project operational-source DPM emissions is Location R5, which represents the adjacent potential worker receptor approximately 58 feet east of the Project site. At the Maximally Exposed Individual Worker

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3 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.

(MEIW), the maximum incremental cancer risk impact is 0.25 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 <0.01, 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 analyzed 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 are illustrated on Exhibit 2-D.

School Child Exposure Scenario:

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 California Air Resources Board (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).

The 1,000-foot evaluation distance is supported by research-based findings concerning TAC emission dispersion rates from roadways and large sources showing that emissions diminish substantially between 500 and 1,000 feet from emission sources.

A one-quarter mile radius, or 1,320 feet, is commonly utilized for identifying sensitive receptors, such as schools, that may be impacted by a proposed project. This radius is more robust than, and therefore provides a more health protective scenario for evaluation than the 1,000-foot impact radius identified above.

There are no schools within ¼ mile of the Project site. The nearest school is Chaparral Elementary School, which is located approximately 11,200 feet southeast of the Project site. Because there is no reasonable potential that TAC emissions would cause significant health impacts at distances of more than ¼ mile from the air pollution source, there would be no significant impacts that would occur to any schools in the vicinity of the Project.

CONSTRUCTION AND OPERATIONAL IMPACTS

The land use with the greatest potential increased cancer risk due to exposure to Project construction-source and operational-source DPM emissions is Location R6. As shown in Table ES-3, at this location, the maximum incremental cancer risk attributable to Project construction and operational DPM source emissions is estimated at <0.01 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and operational activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

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EXHIBIT 2-D: RECEPTOR LOCATIONS
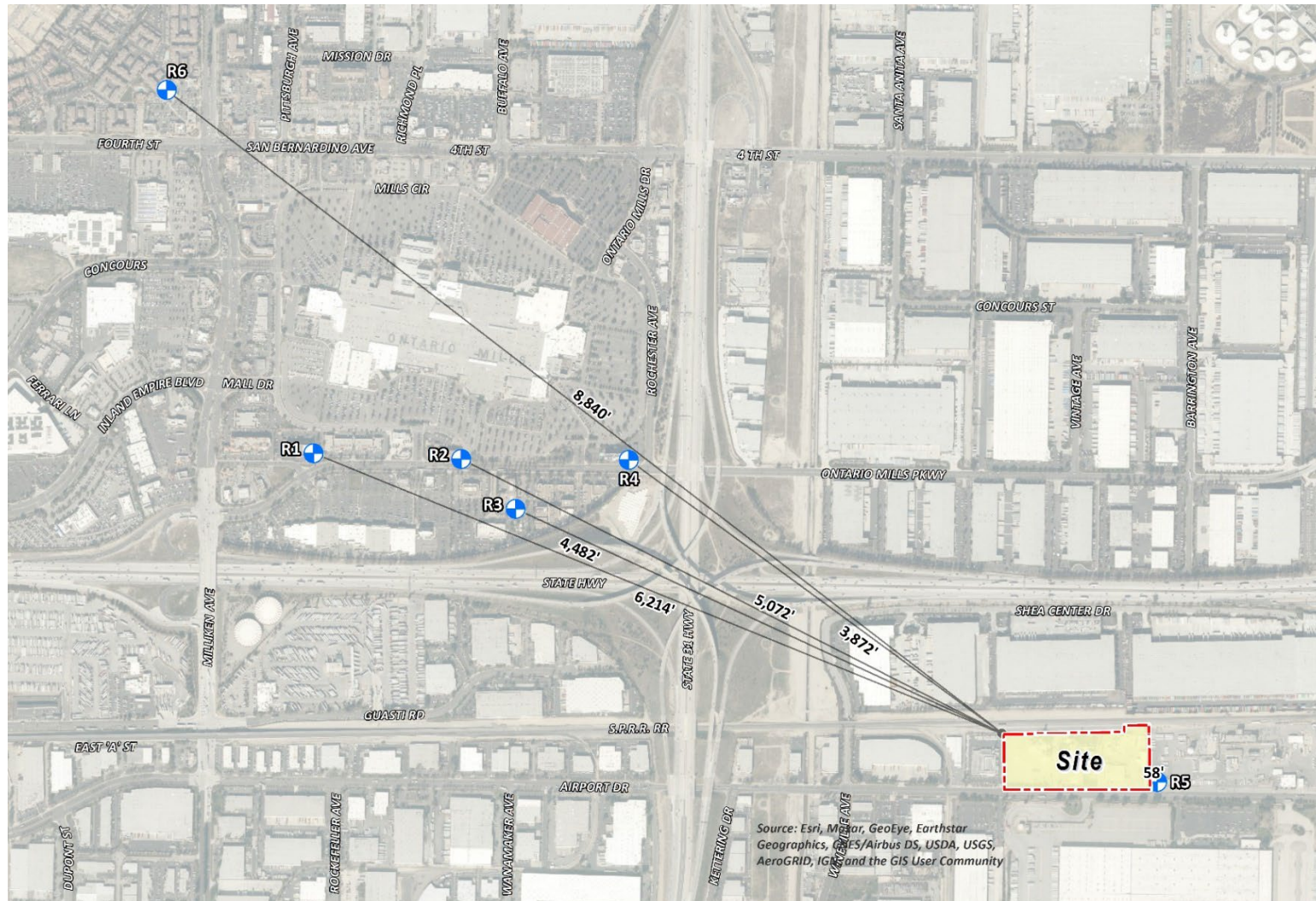
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4 CERTIFICATIONS

The contents of this health risk assessment represent an accurate depiction of the impacts to sensitive receptors associated with the proposed 5355 East Airport Drive 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 at (949) 660-1994.

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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:

CALEEMOD OUTPUTS

IE Distribution Center #14 (Construction) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	IE Distribution Center #14 (Construction)
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	20.8
Location	34.06334566920109, -117.53410603073728
County	San Bernardino-South Coast
City	Ontario
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5288
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	243	1000sqft	7.08	243,303	65,274	0.00	—	—
Refrigerated Warehouse-No Rail	27.0	1000sqft	0.79	27,034	7,253	0.00	—	—

| Parking Lot | 299 | Space | 1.53 | 0.00 | 0.00 | 0.00 | — | — |
| Other Asphalt Surfaces | 161 | 1000sqft | 3.68 | 0.00 | 0.00 | 0.00 | — | — |

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.13	47.2	39.6	71.8	0.13	0.38	9.62	9.95	0.36	4.00	4.32	—	15,836	15,836	0.86	0.60	10.9	16,044
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.08	47.1	30.4	53.5	0.07	0.38	2.20	2.58	0.36	0.52	0.89	—	9,589	9,589	0.43	0.25	0.28	9,674
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.67	4.08	10.5	18.5	0.03	0.13	1.31	1.44	0.12	0.45	0.57	—	3,729	3,729	0.19	0.12	1.43	3,770
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.12	0.74	1.92	3.37	0.01	0.02	0.24	0.26	0.02	0.08	0.10	—	617	617	0.03	0.02	0.24	624

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.13	1.77	39.6	71.8	0.13	0.33	9.62	9.95	0.32	4.00	4.32	—	15,836	15,836	0.86	0.60	9.37	16,044
2024	2.12	47.2	30.2	56.6	0.07	0.38	2.20	2.58	0.36	0.52	0.89	—	9,771	9,771	0.43	0.25	10.9	9,867
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.65	1.48	21.7	39.8	0.06	0.26	1.70	1.96	0.25	0.41	0.65	—	7,437	7,437	0.35	0.22	0.24	7,510
2024	2.08	47.1	30.4	53.5	0.07	0.38	2.20	2.58	0.36	0.52	0.89	—	9,589	9,589	0.43	0.25	0.28	9,674
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.67	0.59	10.5	18.5	0.03	0.13	1.31	1.44	0.12	0.45	0.57	—	3,729	3,729	0.19	0.12	1.43	3,770
2024	0.38	4.08	5.50	9.86	0.01	0.07	0.40	0.46	0.06	0.09	0.16	—	1,790	1,790	0.08	0.05	0.88	1,807
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.12	0.11	1.92	3.37	0.01	0.02	0.24	0.26	0.02	0.08	0.10	—	617	617	0.03	0.02	0.24	624
2024	0.07	0.74	1.00	1.80	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	296	296	0.01	0.01	0.14	299

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	0.51	12.7	18.7	0.03	0.23	—	0.23	0.22	—	0.22	—	3,529	3,529	0.14	0.03	—	3,541

Demolitio	—	—	—	—	—	—	0.45	0.45	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	2.09	3.07	0.01	0.04	—	0.04	0.04	—	0.04	—	580	580	0.02	< 0.005	—	582
Demolition	—	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.38	0.56	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96.0	96.0	< 0.005	< 0.005	—	96.4
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.67	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	264	264	0.01	0.01	1.13	268
Vendor	0.04	0.01	0.38	0.20	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	317	317	0.03	0.05	0.87	332
Hauling	0.03	< 0.005	0.27	0.15	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	214	214	0.02	0.03	0.45	226
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.02	0.22	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	40.4	40.4	< 0.005	< 0.005	0.08	41.0
Vendor	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	52.1	52.1	< 0.005	0.01	0.06	54.6
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	35.2	35.2	< 0.005	0.01	0.03	37.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	6.69	6.69	< 0.005	< 0.005	0.01	6.78
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.63	8.63	< 0.005	< 0.005	0.01	9.03
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.84	5.84	< 0.005	< 0.005	0.01	6.13

3.3. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	0.68	15.7	30.0	0.05	0.10	—	0.10	0.10	—	0.10	—	5,530	5,530	0.22	0.04	—	5,549
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.06	1.29	2.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	455	455	0.02	< 0.005	—	456

Dust From Material Movement	—	—	—	—	—	—	0.47	0.47	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.24	0.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	75.2	75.2	< 0.005	< 0.005	—	75.5
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.67	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	264	264	0.01	0.01	1.13	268
Vendor	0.02	< 0.005	0.19	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	158	158	0.01	0.02	0.44	166
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	20.2	20.2	< 0.005	< 0.005	0.04	20.5
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.0	13.0	< 0.005	< 0.005	0.02	13.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	3.34	3.34	< 0.005	< 0.005	0.01	3.39
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.16	2.16	< 0.005	< 0.005	< 0.005	2.26

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.82	19.9	36.2	0.06	0.18	—	0.18	0.18	—	0.18	—	6,715	6,715	0.27	0.05	—	6,738
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	1.64	2.97	0.01	0.02	—	0.02	0.01	—	0.01	—	552	552	0.02	< 0.005	—	554
Dust From Material Movement	—	—	—	—	—	—	0.22	0.22	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.30	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	91.4	91.4	< 0.005	< 0.005	—	91.7

	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.11	1.85	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	294	294	0.01	0.01	1.26	298
Vendor	0.02	< 0.005	0.19	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	158	158	0.01	0.02	0.44	166
Hauling	0.37	0.06	3.43	1.91	0.02	0.03	0.20	0.23	0.03	0.07	0.10	—	2,716	2,716	0.31	0.43	5.65	2,857
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	22.4	22.4	< 0.005	< 0.005	0.04	22.8
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.0	13.0	< 0.005	< 0.005	0.02	13.6
Hauling	0.03	< 0.005	0.30	0.16	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	223	223	0.03	0.04	0.20	235
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	3.72	3.72	< 0.005	< 0.005	0.01	3.77
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.16	2.16	< 0.005	< 0.005	< 0.005	2.26
Hauling	0.01	< 0.005	0.05	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	37.0	37.0	< 0.005	0.01	0.03	38.8

3.7. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.87	20.0	31.4	0.05	0.25	—	0.25	0.23	—	0.23	—	5,110	5,110	0.21	0.04	—	5,128
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.000	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.87	20.0	31.4	0.05	0.25	—	0.25	0.23	—	0.23	—	5,110	5,110	0.21	0.04	—	5,128
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.000	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.20	4.61	7.24	0.01	0.06	—	0.06	0.05	—	0.05	—	1,180	1,180	0.05	0.01	—	1,184
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.000	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.84	1.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	195	195	0.01	< 0.005	—	196
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.000	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.69	0.63	0.60	10.6	0.00	0.00	0.09	0.09	0.00	0.00	0.00	—	1,675	1,675	0.07	0.06	7.18	1,700
Vendor	0.09	0.02	0.94	0.51	0.01	0.01	0.04	0.06	0.01	0.02	0.03	—	792	792	0.07	0.12	2.19	831
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.65	0.59	0.70	7.94	0.00	0.00	0.09	0.09	0.00	0.00	0.00	—	1,534	1,534	0.07	0.06	0.19	1,553
Vendor	0.09	0.02	0.98	0.51	0.01	0.01	0.04	0.06	0.01	0.02	0.03	—	793	793	0.07	0.12	0.06	829
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.16	1.94	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	359	359	0.02	0.01	0.72	364
Vendor	0.02	< 0.005	0.23	0.12	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	183	183	0.02	0.03	0.22	192
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.35	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	59.5	59.5	< 0.005	< 0.005	0.12	60.3
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	30.3	30.3	< 0.005	< 0.005	0.04	31.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.87	20.0	31.4	0.05	0.25	—	0.25	0.23	—	0.23	—	5,110	5,110	0.21	0.04	—	5,127
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.91	0.87	20.0	31.4	0.05	0.25	—	0.25	0.23	—	0.23	—	5,110	5,110	0.21	0.04	—	5,127
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.18	4.14	6.51	0.01	0.05	—	0.05	0.05	—	0.05	—	1,060	1,060	0.04	0.01	—	1,064
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.76	1.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	175	175	0.01	< 0.005	—	176
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.65	0.60	0.55	9.64	0.00	0.00	0.09	0.09	0.00	0.00	0.00	—	1,641	1,641	0.07	0.06	6.56	1,666
Vendor	0.08	0.02	0.90	0.48	0.01	0.01	0.04	0.06	0.01	0.02	0.03	—	784	784	0.06	0.12	2.19	822
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.62	0.56	0.65	7.29	0.00	0.00	0.09	0.09	0.00	0.00	0.00	—	1,504	1,504	0.07	0.06	0.17	1,523
Vendor	0.08	0.02	0.94	0.49	0.01	0.01	0.04	0.06	0.01	0.02	0.03	—	784	784	0.06	0.12	0.06	821
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.14	1.59	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	316	316	0.01	0.01	0.59	321
Vendor	0.02	< 0.005	0.20	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	163	163	0.01	0.02	0.20	170

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	52.4	52.4	< 0.005	< 0.005	0.10	53.1
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	26.9	26.9	< 0.005	< 0.005	0.03	28.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.23	7.21	10.6	0.01	0.09	—	0.09	0.08	—	0.08	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.23	7.21	10.6	0.01	0.09	—	0.09	0.08	—	0.08	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.89	1.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	186	186	0.01	< 0.005	—	187
Paving	—	0.04																

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.16	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	30.9	30.9	< 0.005	< 0.005	—	31.0
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	1.27	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	216	216	0.01	0.01	0.86	219
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.96	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	198	198	0.01	0.01	0.02	200
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	24.7	24.7	< 0.005	< 0.005	0.05	25.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	4.10	4.10	< 0.005	< 0.005	0.01	4.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	1.43	1.28	< 0.005	0.04	—	0.04	0.04	—	0.04	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	44.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	1.43	1.28	< 0.005	0.04	—	0.04	0.04	—	0.04	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	44.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.12	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.6	14.6	< 0.005	< 0.005	—	14.7
Architectural Coatings	—	3.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.42	2.42	< 0.005	< 0.005	—	2.43
Architectural Coatings	—	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.11	1.95	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	331	331	0.01	0.01	1.32	336
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.11	0.13	1.47	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	303	303	0.01	0.01	0.03	307
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	25.3	25.3	< 0.005	< 0.005	0.05	25.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	4.19	4.19	< 0.005	< 0.005	0.01	4.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	5/2/2023	7/24/2023	5.00	60.0	—
Site Preparation	Site Preparation	7/25/2023	9/4/2023	5.00	30.0	—
Grading	Grading	7/25/2023	9/4/2023	5.00	30.0	—
Building Construction	Building Construction	9/5/2023	4/15/2024	5.00	160	—
Paving	Paving	2/13/2024	4/15/2024	5.00	45.0	—
Architectural Coating	Architectural Coating	3/5/2024	4/15/2024	5.00	30.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Interim	2.00	8.00	367	0.40

Demolition	Excavators	Diesel	Tier 4 Interim	3.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Interim	1.00	8.00	33.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	3.00	8.00	367	0.40
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Grading	Scrapers	Diesel	Tier 4 Interim	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Tier 4 Interim	5.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 4 Interim	2.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Tier 4 Interim	2.00	8.00	367	0.29
Building Construction	Welders	Diesel	Tier 4 Interim	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Interim	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 4 Interim	1.00	8.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Tier 4 Interim	4.00	8.00	87.0	0.43
Grading	Crawler Tractors	Diesel	Tier 4 Interim	2.00	8.00	87.0	0.43
Building Construction	Crawler Tractors	Diesel	Tier 4 Interim	5.00	8.00	87.0	0.43
Demolition	Generator Sets	Diesel	Tier 4 Interim	1.00	8.00	14.0	0.74

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	18.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	10.0	10.2	HHDT,MHDT

Demolition	Hauling	3.00	20.0	HHDT
Demolition	Onsite truck	0.00	0.00	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	18.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	5.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	0.00	0.00	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	5.00	10.2	HHDT,MHDT
Grading	Hauling	38.0	20.0	HHDT
Grading	Onsite truck	0.00	0.00	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	114	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	25.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	0.00	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	0.00	0.00	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	23.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	0.00	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	415,727	138,576	13,629

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,922	—
Site Preparation	0.00	0.00	105	0.00	—
Grading	0.00	9,000	120	0.00	—
Paving	0.00	0.00	0.00	0.00	5.21

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

Unrefrigerated Warehouse-No Rail	0.00		0%
Refrigerated Warehouse-No Rail	0.00		0%
Parking Lot	1.53		100%
Other Asphalt Surfaces	3.68		100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005
2024	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	19.1	annual days of extreme heat
Extreme Precipitation	5.30	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	95.7
AQ-DPM	96.6
Drinking Water	93.3
Lead Risk Housing	8.61
Pesticides	0.00
Toxic Releases	78.9
Traffic	89.1
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	30.9
Haz Waste Facilities/Generators	78.8
Impaired Water Bodies	0.00
Solid Waste	70.4
Sensitive Population	—
Asthma	47.3
Cardio-vascular	67.3
Low Birth Weights	57.1
Socioeconomic Factor Indicators	—
Education	40.5
Housing	32.3
Linguistic	18.1
Poverty	23.9
Unemployment	53.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	76.78686
Employed	63.51854228
Education	—
Bachelor's or higher	44.59129988
High school enrollment	3.977928911
Preschool enrollment	15.60374695
Transportation	—
Auto Access	88.68215065
Active commuting	10.11163865
Social	—
2-parent households	11.86962659
Voting	50.91749006
Neighborhood	—
Alcohol availability	69.3314513
Park access	61.63223406
Retail density	69.31861927
Supermarket access	2.399589375
Tree canopy	29.69331451
Housing	—
Homeownership	78.81432054
Housing habitability	80.20017965
Low-inc homeowner severe housing cost burden	88.74631079
Low-inc renter severe housing cost burden	37.86731682
Uncrowded housing	60.77248813
Health Outcomes	—

Insured adults	67.2783267
Arthritis	74.6
Asthma ER Admissions	54.3
High Blood Pressure	79.9
Cancer (excluding skin)	68.9
Asthma	49.0
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	74.0
Diagnosed Diabetes	64.3
Life Expectancy at Birth	52.5
Cognitively Disabled	87.2
Physically Disabled	77.4
Heart Attack ER Admissions	10.4
Mental Health Not Good	50.5
Chronic Kidney Disease	79.8
Obesity	43.5
Pedestrian Injuries	99.0
Physical Health Not Good	58.2
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	19.3
Current Smoker	53.5
No Leisure Time for Physical Activity	61.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	32.5

Elderly	84.2
English Speaking	91.4
Foreign-born	35.9
Outdoor Workers	45.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	76.5
Traffic Density	89.2
Traffic Access	46.3
Other Indices	—
Hardship	44.0
Other Decision Support	—
2016 Voting	74.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	42.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Total Project Site is 13.08 acres
Construction: Construction Phases	Construction anticipated to end in April 2024
Construction: Off-Road Equipment	Construction equipment based on equipment needed for other industrial projects within the area
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	Rule 1113

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APPENDIX 2.2:

EMFAC EMISSIONS SUMMARY

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
	Demolition	0.23	60	13.8	0.23	0.02875
On-Site	Site Preparation	0.10	30	3	0.1	0.0125
Exhaust PM-10	Grading	0.18	30	5.4	0.18	0.0225
	Building Construction	0.25	160	40	0.25	0.03125
	Paving	0.09	45	4.05	0.09	0.01125
	Architectural Coatings	0.04	30	1.2	0.04	0.005
		0.89	250	67.45	0.2698	0.033725
	Demolition	1.00E-02	60	0.6	0.01	0.00125
Off-Site	Site Preparation	5.00E-03	30	0.15	0.005	0.000625
Exhaust PM-10	Grading	3.50E-02	30	1.05	0.035	0.004375
	Building Construction	1.00E-02	160	1.6	0.01	0.00125
	Paving	0.00E+00	45	0	0	0
	Architectural Coatings	0.00E+00	30	0	0	0
		6.00E-02	250	3.4	0.0136	0.0017

Phase	Start Date	End Date	No. Days
Demolition	5/2/2023	7/24/2023	60
Site Preparation	7/25/2023	9/4/2023	30
Grading	7/25/2023	9/4/2023	30
Building Construction	9/5/2023	4/15/2024	160
Paving	2/13/2024	4/15/2024	45
Arch Coatings	3/5/2024	4/15/2024	30
		Total Days of Construction	**250**

AVERAGE EMISSION FACTOR
SAN BERNARDINO COUNTY 2024

Speed	LHD1	LHD2	MHD	HHD
0	0.316954	0.498613	0.051812	0.01310
5	0.039143	0.05572	0.030547	0.01151
25	0.01796	0.026556	0.00817	0.00576

Speed	Weighted Average Emissions
0	0.08568
5	0.02107
25	0.00889

		VMT [a]	Truck Emission Rate [b]	Truck Emission Rate [b]	Daily Truck Emissions [c]	Modeled Emission Rates
Source	**Trucks Per Day**	**(miles/day)**	**(grams/mile)**	**(grams/idle-hour)**	**(grams/day)**	**(g/second)**
On-Site Idling	84			0.0857	3.90	4.517E-05
On-Site Travel	168	41.19	0.0211		1.28	1.482E-05
Off-Site Travel - E. Airport Dr./S. Etiwanda Ave. 100% Inbound/Outbound	168	193.05	0.0089		2.10	2.434E-05

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

[b] Emission rates determined using EMFAC 2021. 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.

calendar_y	season_m	sub_area	vehicle_class	fuel	temperatur	relative_hu	process	speed_tim	pollutant	emission_rate
2024	Annual	San Berna	HHDT	Dsl	60	70	RUNEX	5	PM10	0.01351
2024	Annual	San Berna	HHDT	Dsl	60	70	RUNEX	25	PM10	0.006762
2024	Annual	San Berna	LHDT1	Dsl	60	70	RUNEX	5	PM10	0.098223
2024	Annual	San Berna	LHDT1	Dsl	60	70	RUNEX	25	PM10	0.045069
2024	Annual	San Berna	LHDT2	Dsl	60	70	RUNEX	5	PM10	0.089018
2024	Annual	San Berna	LHDT2	Dsl	60	70	RUNEX	25	PM10	0.042425
2024	Annual	San Berna	MHDT	Dsl	60	70	RUNEX	5	PM10	0.033532
2024	Annual	San Berna	MHDT	Dsl	60	70	RUNEX	25	PM10	0.008968

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population
San Berna	2024	HHDT	Aggregate	Aggregate	Gasoline	5.56599
San Berna	2024	HHDT	Aggregate	Aggregate	Diesel	14232
San Berna	2024	HHDT	Aggregate	Aggregate	Natural Ga	2469.47
San Berna	2024	LHDT1	Aggregate	Aggregate	Gasoline	17179.5
San Berna	2024	LHDT1	Aggregate	Aggregate	Diesel	11382.1
San Berna	2024	LHDT2	Aggregate	Aggregate	Gasoline	2883.7
San Berna	2024	LHDT2	Aggregate	Aggregate	Diesel	4825.53
San Berna	2024	MHDT	Aggregate	Aggregate	Gasoline	1460.6
San Berna	2024	MHDT	Aggregate	Aggregate	Diesel	14946.5
San Berna	2024	MHDT	Aggregate	Aggregate	Natural Ga	195.676

HHDT% GAS/NG	0.14814
HHDT% DSL	0.85186
LHDT1% GAS	0.60149
LHDT1% DSL	0.39851
LHDT2% GAS	0.37406
LHDT2% DSL	0.62594
MHDT% GAS	0.08902
MHDT% DSL	0.91098

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URBAN
CROSSROADS

APPENDIX 2.3:

AERMOD MODEL INPUT/OUTPUT

```
**
*****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 8/23/2022
** File: C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE Distribution\14539 Ops\14539 Ops.ADI
**
*****************************************
**
**
*****************************************
** AERMOD Control Pathway
*****************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE Distribution\14539 Ops
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2035210 San_Bernadino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "14539 Ops.err"
CO FINISHED
**
*****************************************
** AERMOD Source Pathway
*****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** -----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Idling
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00004517
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 450584.276, 3769293.332, 298.63, 3.49, 4.00
** 450819.830, 3769300.271, 298.67, 3.49, 4.00
** -----------------------------------------------------------------
   LOCATION L0000338      VOLUME    450588.570 3769293.458 298.57
   LOCATION L0000339      VOLUME    450597.156 3769293.711 298.58
   LOCATION L0000340      VOLUME    450605.742 3769293.964 298.58
   LOCATION L0000341      VOLUME    450614.328 3769294.217 298.60
   LOCATION L0000342      VOLUME    450622.915 3769294.470 298.64
   LOCATION L0000343      VOLUME    450631.501 3769294.723 298.67
   LOCATION L0000344      VOLUME    450640.087 3769294.976 298.70
   LOCATION L0000345      VOLUME    450648.673 3769295.229 298.70
   LOCATION L0000346      VOLUME    450657.260 3769295.482 298.70
   LOCATION L0000347      VOLUME    450665.846 3769295.735 298.70
   LOCATION L0000348      VOLUME    450674.432 3769295.988 298.70
   LOCATION L0000349      VOLUME    450683.019 3769296.241 298.70
   LOCATION L0000350      VOLUME    450691.605 3769296.494 298.70
   LOCATION L0000351      VOLUME    450700.191 3769296.746 298.70
   LOCATION L0000352      VOLUME    450708.777 3769296.999 298.67
   LOCATION L0000353      VOLUME    450717.364 3769297.252 298.65
   LOCATION L0000354      VOLUME    450725.950 3769297.505 298.62
```

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    LOCATION L0000355        VOLUME      450734.536 3769297.758 298.62
    LOCATION L0000356        VOLUME      450743.122 3769298.011 298.62
    LOCATION L0000357        VOLUME      450751.709 3769298.264 298.62
    LOCATION L0000358        VOLUME      450760.295 3769298.517 298.62
    LOCATION L0000359        VOLUME      450768.881 3769298.770 298.60
    LOCATION L0000360        VOLUME      450777.468 3769299.023 298.59
    LOCATION L0000361        VOLUME      450786.054 3769299.276 298.57
    LOCATION L0000362        VOLUME      450794.640 3769299.529 298.57
    LOCATION L0000363        VOLUME      450803.226 3769299.782 298.57
    LOCATION L0000364        VOLUME      450811.813 3769300.035 298.58
** End of LINE VOLUME Source ID = SLINE1
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Onsite
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001482
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 8
** 450532.053, 3769244.030, 298.41, 3.49, 4.00
** 450532.053, 3769261.560, 298.60, 3.49, 4.00
** 450581.355, 3769261.925, 298.54, 3.49, 4.00
** 450593.772, 3769274.707, 298.44, 3.49, 4.00
** 450781.484, 3769278.359, 298.14, 3.49, 4.00
** 450819.830, 3769274.342, 298.10, 3.49, 4.00
** 450875.340, 3769273.976, 298.68, 3.49, 4.00
** 450876.071, 3769245.856, 298.09, 3.49, 4.00
** ------------------------------------------------------------------------
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    LOCATION L0000366        VOLUME      450532.053 3769256.915 298.51
    LOCATION L0000367        VOLUME      450535.998 3769261.589 298.55
    LOCATION L0000368        VOLUME      450544.588 3769261.652 298.55
    LOCATION L0000369        VOLUME      450553.178 3769261.716 298.55
    LOCATION L0000370        VOLUME      450561.767 3769261.780 298.55
    LOCATION L0000371        VOLUME      450570.357 3769261.843 298.55
    LOCATION L0000372        VOLUME      450578.947 3769261.907 298.55
    LOCATION L0000373        VOLUME      450585.662 3769266.359 298.50
    LOCATION L0000374        VOLUME      450591.648 3769272.520 298.44
    LOCATION L0000375        VOLUME      450599.313 3769274.815 298.41
    LOCATION L0000376        VOLUME      450607.901 3769274.982 298.41
    LOCATION L0000377        VOLUME      450616.489 3769275.149 298.48
    LOCATION L0000378        VOLUME      450625.078 3769275.316 298.56
    LOCATION L0000379        VOLUME      450633.666 3769275.483 298.65
    LOCATION L0000380        VOLUME      450642.254 3769275.650 298.70
    LOCATION L0000381        VOLUME      450650.843 3769275.817 298.70
    LOCATION L0000382        VOLUME      450659.431 3769275.984 298.70
    LOCATION L0000383        VOLUME      450668.020 3769276.151 298.70
    LOCATION L0000384        VOLUME      450676.608 3769276.318 298.70
    LOCATION L0000385        VOLUME      450685.196 3769276.485 298.70
    LOCATION L0000386        VOLUME      450693.785 3769276.652 298.70
    LOCATION L0000387        VOLUME      450702.373 3769276.820 298.68
    LOCATION L0000388        VOLUME      450710.961 3769276.987 298.59
    LOCATION L0000389        VOLUME      450719.550 3769277.154 298.51
    LOCATION L0000390        VOLUME      450728.138 3769277.321 298.42
    LOCATION L0000391        VOLUME      450736.727 3769277.488 298.41
    LOCATION L0000392        VOLUME      450745.315 3769277.655 298.41
    LOCATION L0000393        VOLUME      450753.903 3769277.822 298.41
    LOCATION L0000394        VOLUME      450762.492 3769277.989 298.39
    LOCATION L0000395        VOLUME      450771.080 3769278.156 298.31
    LOCATION L0000396        VOLUME      450779.668 3769278.323 298.23
    LOCATION L0000397        VOLUME      450788.221 3769277.653 298.13
    LOCATION L0000398        VOLUME      450796.764 3769276.758 298.10
    LOCATION L0000399        VOLUME      450805.308 3769275.863 298.10
```

```
   LOCATION L0000400      VOLUME    450813.851 3769274.968 298.11
   LOCATION L0000401      VOLUME    450822.408 3769274.325 298.14
   LOCATION L0000402      VOLUME    450830.998 3769274.268 298.22
   LOCATION L0000403      VOLUME    450839.588 3769274.212 298.29
   LOCATION L0000404      VOLUME    450848.178 3769274.155 298.37
   LOCATION L0000405      VOLUME    450856.767 3769274.099 298.44
   LOCATION L0000406      VOLUME    450865.357 3769274.042 298.52
   LOCATION L0000407      VOLUME    450873.947 3769273.985 298.60
   LOCATION L0000408      VOLUME    450875.527 3769266.782 298.48
   LOCATION L0000409      VOLUME    450875.750 3769258.195 298.32
   LOCATION L0000410      VOLUME    450875.973 3769249.608 298.16
** End of LINE VOLUME Source ID = SLINE2
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Offsite
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.00002434
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 14
** 450531.488, 3769231.780, 298.42, 3.49, 6.51
** 451458.160, 3769224.475, 296.68, 3.49, 6.51
** 451477.884, 3769223.014, 297.16, 3.49, 6.51
** 451508.566, 3769211.326, 297.73, 3.49, 6.51
** 451579.062, 3769183.931, 297.18, 3.49, 6.51
** 451600.612, 3769178.452, 297.61, 3.49, 6.51
** 451630.198, 3769176.626, 297.58, 3.49, 6.51
** 451633.851, 3769205.116, 298.46, 3.49, 6.51
** 451632.755, 3769377.520, 307.01, 3.49, 6.51
** 451633.851, 3769443.268, 304.95, 3.49, 6.51
** 451634.581, 3769487.099, 305.91, 3.49, 6.51
** 451637.869, 3769611.288, 307.59, 3.49, 6.51
** 451637.869, 3769784.058, 305.17, 3.49, 6.51
** 451642.335, 3769918.705, 307.93, 3.49, 6.51
** ------------------------------------------------------------------------
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   LOCATION L0000412      VOLUME    450552.488 3769231.615 298.43
   LOCATION L0000413      VOLUME    450566.487 3769231.505 298.57
   LOCATION L0000414      VOLUME    450580.487 3769231.394 298.70
   LOCATION L0000415      VOLUME    450594.486 3769231.284 298.70
   LOCATION L0000416      VOLUME    450608.486 3769231.173 298.70
   LOCATION L0000417      VOLUME    450622.485 3769231.063 298.70
   LOCATION L0000418      VOLUME    450636.485 3769230.953 298.70
   LOCATION L0000419      VOLUME    450650.485 3769230.842 298.70
   LOCATION L0000420      VOLUME    450664.484 3769230.732 298.70
   LOCATION L0000421      VOLUME    450678.484 3769230.622 298.61
   LOCATION L0000422      VOLUME    450692.483 3769230.511 298.47
   LOCATION L0000423      VOLUME    450706.483 3769230.401 298.40
   LOCATION L0000424      VOLUME    450720.482 3769230.291 298.40
   LOCATION L0000425      VOLUME    450734.482 3769230.180 298.40
   LOCATION L0000426      VOLUME    450748.481 3769230.070 298.40
   LOCATION L0000427      VOLUME    450762.481 3769229.959 298.40
   LOCATION L0000428      VOLUME    450776.481 3769229.849 298.40
   LOCATION L0000429      VOLUME    450790.480 3769229.739 298.40
   LOCATION L0000430      VOLUME    450804.480 3769229.628 298.40
   LOCATION L0000431      VOLUME    450818.479 3769229.518 298.40
   LOCATION L0000432      VOLUME    450832.479 3769229.408 298.34
   LOCATION L0000433      VOLUME    450846.478 3769229.297 298.28
   LOCATION L0000434      VOLUME    450860.478 3769229.187 298.08
   LOCATION L0000435      VOLUME    450874.478 3769229.077 297.83
   LOCATION L0000436      VOLUME    450888.477 3769228.966 297.74
   LOCATION L0000437      VOLUME    450902.477 3769228.856 297.74
   LOCATION L0000438      VOLUME    450916.476 3769228.745 297.70
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LOCATION L0000440     VOLUME     450944.475 3769228.525 297.50
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LOCATION L0000442     VOLUME     450972.475 3769228.304 297.23
LOCATION L0000443     VOLUME     450986.474 3769228.194 297.17
LOCATION L0000444     VOLUME     451000.474 3769228.083 297.11
LOCATION L0000445     VOLUME     451014.473 3769227.973 297.05
LOCATION L0000446     VOLUME     451028.473 3769227.863 297.00
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LOCATION L0000448     VOLUME     451056.472 3769227.642 296.82
LOCATION L0000449     VOLUME     451070.471 3769227.531 296.76
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LOCATION L0000454     VOLUME     451140.469 3769226.980 296.54
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LOCATION L0000457     VOLUME     451182.468 3769226.649 296.37
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LOCATION L0000459     VOLUME     451210.467 3769226.428 296.36
LOCATION L0000460     VOLUME     451224.467 3769226.317 296.32
LOCATION L0000461     VOLUME     451238.466 3769226.207 296.27
LOCATION L0000462     VOLUME     451252.466 3769226.097 296.18
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LOCATION L0000466     VOLUME     451308.464 3769225.655 295.66
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LOCATION L0000474     VOLUME     451420.461 3769224.772 296.58
LOCATION L0000475     VOLUME     451434.460 3769224.662 296.65
LOCATION L0000476     VOLUME     451448.460 3769224.552 296.73
LOCATION L0000477     VOLUME     451462.448 3769224.158 296.96
LOCATION L0000478     VOLUME     451476.409 3769223.123 297.19
LOCATION L0000479     VOLUME     451489.585 3769218.556 297.41
LOCATION L0000480     VOLUME     451502.668 3769213.573 297.56
LOCATION L0000481     VOLUME     451515.732 3769208.541 297.47
LOCATION L0000482     VOLUME     451528.782 3769203.470 297.27
LOCATION L0000483     VOLUME     451541.831 3769198.399 297.11
LOCATION L0000484     VOLUME     451554.880 3769193.328 297.17
LOCATION L0000485     VOLUME     451567.930 3769188.257 297.23
LOCATION L0000486     VOLUME     451581.055 3769183.424 297.30
LOCATION L0000487     VOLUME     451594.624 3769179.975 297.39
LOCATION L0000488     VOLUME     451608.418 3769177.970 297.39
LOCATION L0000489     VOLUME     451622.392 3769177.108 297.39
LOCATION L0000490     VOLUME     451630.984 3769182.754 297.63
LOCATION L0000491     VOLUME     451632.764 3769196.640 298.07
LOCATION L0000492     VOLUME     451633.816 3769210.571 298.48
LOCATION L0000493     VOLUME     451633.727 3769224.571 298.95
LOCATION L0000494     VOLUME     451633.638 3769238.570 299.44
LOCATION L0000495     VOLUME     451633.549 3769252.570 299.94
LOCATION L0000496     VOLUME     451633.460 3769266.570 300.44
LOCATION L0000497     VOLUME     451633.371 3769280.570 301.02
LOCATION L0000498     VOLUME     451633.282 3769294.569 301.79
LOCATION L0000499     VOLUME     451633.193 3769308.569 302.60
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LOCATION L0000501     VOLUME     451633.015 3769336.568 304.59
LOCATION L0000502     VOLUME     451632.926 3769350.568 305.92
LOCATION L0000503     VOLUME     451632.837 3769364.568 307.24
LOCATION L0000504     VOLUME     451632.773 3769378.567 307.33
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        LOCATION L0000510      VOLUME    451634.172 3769462.556 304.97
        LOCATION L0000511      VOLUME    451634.406 3769476.554 305.44
        LOCATION L0000512      VOLUME    451634.673 3769490.551 305.91
        LOCATION L0000513      VOLUME    451635.043 3769504.546 306.38
        LOCATION L0000514      VOLUME    451635.414 3769518.541 306.72
        LOCATION L0000515      VOLUME    451635.784 3769532.536 306.47
        LOCATION L0000516      VOLUME    451636.155 3769546.532 306.23
        LOCATION L0000517      VOLUME    451636.525 3769560.527 306.34
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        LOCATION L0000519      VOLUME    451637.266 3769588.517 306.97
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        LOCATION L0000522      VOLUME    451637.869 3769630.509 307.75
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        LOCATION L0000524      VOLUME    451637.869 3769658.509 306.32
        LOCATION L0000525      VOLUME    451637.869 3769672.509 305.61
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        LOCATION L0000527      VOLUME    451637.869 3769700.509 304.74
        LOCATION L0000528      VOLUME    451637.869 3769714.509 304.53
        LOCATION L0000529      VOLUME    451637.869 3769728.509 304.39
        LOCATION L0000530      VOLUME    451637.869 3769742.509 304.60
        LOCATION L0000531      VOLUME    451637.869 3769756.509 304.80
        LOCATION L0000532      VOLUME    451637.869 3769770.509 305.06
        LOCATION L0000533      VOLUME    451637.884 3769784.509 305.33
        LOCATION L0000534      VOLUME    451638.348 3769798.501 306.17
        LOCATION L0000535      VOLUME    451638.812 3769812.493 307.08
        LOCATION L0000536      VOLUME    451639.276 3769826.486 307.41
        LOCATION L0000537      VOLUME    451639.740 3769840.478 307.50
        LOCATION L0000538      VOLUME    451640.205 3769854.470 307.84
        LOCATION L0000539      VOLUME    451640.669 3769868.462 308.36
        LOCATION L0000540      VOLUME    451641.133 3769882.455 308.51
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** End of LINE VOLUME Source ID = SLINE3
** Source Parameters **
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        SRCPARAM L0000362      0.000001673       3.49       4.00       3.25
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   SRCPARAM L0000363      0.000001673      3.49      4.00      3.25
   SRCPARAM L0000364      0.000001673      3.49      4.00      3.25
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      SRCPARAM L0000532      0.0000001844      3.49      6.51      3.25
      SRCPARAM L0000533      0.0000001844      3.49      6.51      3.25
      SRCPARAM L0000534      0.0000001844      3.49      6.51      3.25
      SRCPARAM L0000535      0.0000001844      3.49      6.51      3.25
      SRCPARAM L0000536      0.0000001844      3.49      6.51      3.25
      SRCPARAM L0000537      0.0000001844      3.49      6.51      3.25
      SRCPARAM L0000538      0.0000001844      3.49      6.51      3.25
      SRCPARAM L0000539      0.0000001844      3.49      6.51      3.25
      SRCPARAM L0000540      0.0000001844      3.49      6.51      3.25
      SRCPARAM L0000541      0.0000001844      3.49      6.51      3.25
      SRCPARAM L0000542      0.0000001844      3.49      6.51      3.25
** ----------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
*****************************************
** AERMOD Receptor Pathway
*****************************************
**
**
RE STARTING
   INCLUDED "14539 Ops.rou"
RE FINISHED
**
```

```
*****************************************
** AERMOD Meteorology Pathway
*****************************************
**
**
ME STARTING
   SURFFILE KONT_V9_ADJU\KONT_v9.SFC
   PROFFILE KONT_V9_ADJU\KONT_v9.PFL
   SURFDATA 3102 2012
   UAIRDATA 3190 2012
   PROFBASE 289.0 METERS
ME FINISHED
**
*****************************************
** AERMOD Output Pathway
*****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "14539 Ops.AD\AN00GALL.PLT" 31
   SUMMFILE "14539 Ops.sum"
OU FINISHED
**
*****************************************
** Project Parameters
*****************************************
** PROJCTN   CoordinateSystemUTM
** DESCPTN   UTM: Universal Transverse Mercator
** DATUM     North American Datum 1983
** DTMRGN    CONUS
** UNITS     m
** ZONE      11
** ZONEINX   0
**
```

```
** Lakes Environmental AERMOD MPI
**
*****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 8/23/2022
** File: C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE Distribution\14539 Ops\14539 Ops.ADI
**
*****************************************
**
**
*****************************************
** AERMOD Control Pathway
*****************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE Distribution\14539 Ops
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2035210 San_Bernadino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "14539 Ops.err"
CO FINISHED
**
*****************************************
** AERMOD Source Pathway
*****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Idling
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00004517
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 450584.276, 3769293.332, 298.63, 3.49, 4.00
** 450819.830, 3769300.271, 298.67, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0000338      VOLUME     450588.570 3769293.458 298.57
   LOCATION L0000339      VOLUME     450597.156 3769293.711 298.58
   LOCATION L0000340      VOLUME     450605.742 3769293.964 298.58
   LOCATION L0000341      VOLUME     450614.328 3769294.217 298.60
   LOCATION L0000342      VOLUME     450622.915 3769294.470 298.64
   LOCATION L0000343      VOLUME     450631.501 3769294.723 298.67
   LOCATION L0000344      VOLUME     450640.087 3769294.976 298.70
   LOCATION L0000345      VOLUME     450648.673 3769295.229 298.70
   LOCATION L0000346      VOLUME     450657.260 3769295.482 298.70
   LOCATION L0000347      VOLUME     450665.846 3769295.735 298.70
   LOCATION L0000348      VOLUME     450674.432 3769295.988 298.70
   LOCATION L0000349      VOLUME     450683.019 3769296.241 298.70
   LOCATION L0000350      VOLUME     450691.605 3769296.494 298.70
   LOCATION L0000351      VOLUME     450700.191 3769296.746 298.70
   LOCATION L0000352      VOLUME     450708.777 3769296.999 298.67
   LOCATION L0000353      VOLUME     450717.364 3769297.252 298.65
```

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    LOCATION L0000354       VOLUME       450725.950 3769297.505 298.62
    LOCATION L0000355       VOLUME       450734.536 3769297.758 298.62
    LOCATION L0000356       VOLUME       450743.122 3769298.011 298.62
    LOCATION L0000357       VOLUME       450751.709 3769298.264 298.62
    LOCATION L0000358       VOLUME       450760.295 3769298.517 298.62
    LOCATION L0000359       VOLUME       450768.881 3769298.770 298.60
    LOCATION L0000360       VOLUME       450777.468 3769299.023 298.59
    LOCATION L0000361       VOLUME       450786.054 3769299.276 298.57
    LOCATION L0000362       VOLUME       450794.640 3769299.529 298.57
    LOCATION L0000363       VOLUME       450803.226 3769299.782 298.57
    LOCATION L0000364       VOLUME       450811.813 3769300.035 298.58
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Onsite
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001482
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 8
** 450532.053, 3769244.030, 298.41, 3.49, 4.00
** 450532.053, 3769261.560, 298.60, 3.49, 4.00
** 450581.355, 3769261.925, 298.54, 3.49, 4.00
** 450593.772, 3769274.707, 298.44, 3.49, 4.00
** 450781.484, 3769278.359, 298.14, 3.49, 4.00
** 450819.830, 3769274.342, 298.10, 3.49, 4.00
** 450875.340, 3769273.976, 298.68, 3.49, 4.00
** 450876.071, 3769245.856, 298.09, 3.49, 4.00
** ----------------------------------------------------------------------
    LOCATION L0000365       VOLUME       450532.053 3769248.325 298.42
    LOCATION L0000366       VOLUME       450532.053 3769256.915 298.51
    LOCATION L0000367       VOLUME       450535.998 3769261.589 298.55
    LOCATION L0000368       VOLUME       450544.588 3769261.652 298.55
    LOCATION L0000369       VOLUME       450553.178 3769261.716 298.55
    LOCATION L0000370       VOLUME       450561.767 3769261.780 298.55
    LOCATION L0000371       VOLUME       450570.357 3769261.843 298.55
    LOCATION L0000372       VOLUME       450578.947 3769261.907 298.55
    LOCATION L0000373       VOLUME       450585.662 3769266.359 298.50
    LOCATION L0000374       VOLUME       450591.648 3769272.520 298.44
    LOCATION L0000375       VOLUME       450599.313 3769274.815 298.41
    LOCATION L0000376       VOLUME       450607.901 3769274.982 298.41
    LOCATION L0000377       VOLUME       450616.489 3769275.149 298.48
    LOCATION L0000378       VOLUME       450625.078 3769275.316 298.56
    LOCATION L0000379       VOLUME       450633.666 3769275.483 298.65
    LOCATION L0000380       VOLUME       450642.254 3769275.650 298.70
    LOCATION L0000381       VOLUME       450650.843 3769275.817 298.70
    LOCATION L0000382       VOLUME       450659.431 3769275.984 298.70
    LOCATION L0000383       VOLUME       450668.020 3769276.151 298.70
    LOCATION L0000384       VOLUME       450676.608 3769276.318 298.70
    LOCATION L0000385       VOLUME       450685.196 3769276.485 298.70
    LOCATION L0000386       VOLUME       450693.785 3769276.652 298.70
    LOCATION L0000387       VOLUME       450702.373 3769276.820 298.68
    LOCATION L0000388       VOLUME       450710.961 3769276.987 298.59
    LOCATION L0000389       VOLUME       450719.550 3769277.154 298.51
    LOCATION L0000390       VOLUME       450728.138 3769277.321 298.42
    LOCATION L0000391       VOLUME       450736.727 3769277.488 298.41
    LOCATION L0000392       VOLUME       450745.315 3769277.655 298.41
    LOCATION L0000393       VOLUME       450753.903 3769277.822 298.41
    LOCATION L0000394       VOLUME       450762.492 3769277.989 298.39
    LOCATION L0000395       VOLUME       450771.080 3769278.156 298.31
    LOCATION L0000396       VOLUME       450779.668 3769278.323 298.23
    LOCATION L0000397       VOLUME       450788.221 3769277.653 298.13
    LOCATION L0000398       VOLUME       450796.764 3769276.758 298.10
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   LOCATION L0000399      VOLUME      450805.308 3769275.863 298.10
   LOCATION L0000400      VOLUME      450813.851 3769274.968 298.11
   LOCATION L0000401      VOLUME      450822.408 3769274.325 298.14
   LOCATION L0000402      VOLUME      450830.998 3769274.268 298.22
   LOCATION L0000403      VOLUME      450839.588 3769274.212 298.29
   LOCATION L0000404      VOLUME      450848.178 3769274.155 298.37
   LOCATION L0000405      VOLUME      450856.767 3769274.099 298.44
   LOCATION L0000406      VOLUME      450865.357 3769274.042 298.52
   LOCATION L0000407      VOLUME      450873.947 3769273.985 298.60
   LOCATION L0000408      VOLUME      450875.527 3769266.782 298.48
   LOCATION L0000409      VOLUME      450875.750 3769258.195 298.32
   LOCATION L0000410      VOLUME      450875.973 3769249.608 298.16
** End of LINE VOLUME Source ID = SLINE2
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Offsite
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.00002434
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 14
** 450531.488, 3769231.780, 298.42, 3.49, 6.51
** 451458.160, 3769224.475, 296.68, 3.49, 6.51
** 451477.884, 3769223.014, 297.16, 3.49, 6.51
** 451508.566, 3769211.326, 297.73, 3.49, 6.51
** 451579.062, 3769183.931, 297.18, 3.49, 6.51
** 451600.612, 3769178.452, 297.61, 3.49, 6.51
** 451630.198, 3769176.626, 297.58, 3.49, 6.51
** 451633.851, 3769205.116, 298.46, 3.49, 6.51
** 451632.755, 3769377.520, 307.01, 3.49, 6.51
** 451633.851, 3769443.268, 304.95, 3.49, 6.51
** 451634.581, 3769487.099, 305.91, 3.49, 6.51
** 451637.869, 3769611.288, 307.59, 3.49, 6.51
** 451637.869, 3769784.058, 305.17, 3.49, 6.51
** 451642.335, 3769918.705, 307.93, 3.49, 6.51
** ------------------------------------------------------------------------
   LOCATION L0000411      VOLUME      450538.488 3769231.725 298.40
   LOCATION L0000412      VOLUME      450552.488 3769231.615 298.43
   LOCATION L0000413      VOLUME      450566.487 3769231.505 298.57
   LOCATION L0000414      VOLUME      450580.487 3769231.394 298.70
   LOCATION L0000415      VOLUME      450594.486 3769231.284 298.70
   LOCATION L0000416      VOLUME      450608.486 3769231.173 298.70
   LOCATION L0000417      VOLUME      450622.485 3769231.063 298.70
   LOCATION L0000418      VOLUME      450636.485 3769230.953 298.70
   LOCATION L0000419      VOLUME      450650.485 3769230.842 298.70
   LOCATION L0000420      VOLUME      450664.484 3769230.732 298.70
   LOCATION L0000421      VOLUME      450678.484 3769230.622 298.61
   LOCATION L0000422      VOLUME      450692.483 3769230.511 298.47
   LOCATION L0000423      VOLUME      450706.483 3769230.401 298.40
   LOCATION L0000424      VOLUME      450720.482 3769230.291 298.40
   LOCATION L0000425      VOLUME      450734.482 3769230.180 298.40
   LOCATION L0000426      VOLUME      450748.481 3769230.070 298.40
   LOCATION L0000427      VOLUME      450762.481 3769229.959 298.40
   LOCATION L0000428      VOLUME      450776.481 3769229.849 298.40
   LOCATION L0000429      VOLUME      450790.480 3769229.739 298.40
   LOCATION L0000430      VOLUME      450804.480 3769229.628 298.40
   LOCATION L0000431      VOLUME      450818.479 3769229.518 298.40
   LOCATION L0000432      VOLUME      450832.479 3769229.408 298.34
   LOCATION L0000433      VOLUME      450846.478 3769229.297 298.28
   LOCATION L0000434      VOLUME      450860.478 3769229.187 298.08
   LOCATION L0000435      VOLUME      450874.478 3769229.077 297.83
   LOCATION L0000436      VOLUME      450888.477 3769228.966 297.74
   LOCATION L0000437      VOLUME      450902.477 3769228.856 297.74
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LOCATION L0000438    VOLUME    450916.476 3769228.745 297.70
LOCATION L0000439    VOLUME    450930.476 3769228.635 297.61
LOCATION L0000440    VOLUME    450944.475 3769228.525 297.50
LOCATION L0000441    VOLUME    450958.475 3769228.414 297.36
LOCATION L0000442    VOLUME    450972.475 3769228.304 297.23
LOCATION L0000443    VOLUME    450986.474 3769228.194 297.17
LOCATION L0000444    VOLUME    451000.474 3769228.083 297.11
LOCATION L0000445    VOLUME    451014.473 3769227.973 297.05
LOCATION L0000446    VOLUME    451028.473 3769227.863 297.00
LOCATION L0000447    VOLUME    451042.472 3769227.752 296.91
LOCATION L0000448    VOLUME    451056.472 3769227.642 296.82
LOCATION L0000449    VOLUME    451070.471 3769227.531 296.76
LOCATION L0000450    VOLUME    451084.471 3769227.421 296.70
LOCATION L0000451    VOLUME    451098.471 3769227.311 296.68
LOCATION L0000452    VOLUME    451112.470 3769227.200 296.68
LOCATION L0000453    VOLUME    451126.470 3769227.090 296.63
LOCATION L0000454    VOLUME    451140.469 3769226.980 296.54
LOCATION L0000455    VOLUME    451154.469 3769226.869 296.46
LOCATION L0000456    VOLUME    451168.468 3769226.759 296.41
LOCATION L0000457    VOLUME    451182.468 3769226.649 296.37
LOCATION L0000458    VOLUME    451196.468 3769226.538 296.37
LOCATION L0000459    VOLUME    451210.467 3769226.428 296.36
LOCATION L0000460    VOLUME    451224.467 3769226.317 296.32
LOCATION L0000461    VOLUME    451238.466 3769226.207 296.27
LOCATION L0000462    VOLUME    451252.466 3769226.097 296.18
LOCATION L0000463    VOLUME    451266.465 3769225.986 296.08
LOCATION L0000464    VOLUME    451280.465 3769225.876 295.95
LOCATION L0000465    VOLUME    451294.465 3769225.766 295.80
LOCATION L0000466    VOLUME    451308.464 3769225.655 295.66
LOCATION L0000467    VOLUME    451322.464 3769225.545 295.52
LOCATION L0000468    VOLUME    451336.463 3769225.435 295.51
LOCATION L0000469    VOLUME    451350.463 3769225.324 295.66
LOCATION L0000470    VOLUME    451364.462 3769225.214 295.85
LOCATION L0000471    VOLUME    451378.462 3769225.103 296.13
LOCATION L0000472    VOLUME    451392.461 3769224.993 296.37
LOCATION L0000473    VOLUME    451406.461 3769224.883 296.48
LOCATION L0000474    VOLUME    451420.461 3769224.772 296.58
LOCATION L0000475    VOLUME    451434.460 3769224.662 296.65
LOCATION L0000476    VOLUME    451448.460 3769224.552 296.73
LOCATION L0000477    VOLUME    451462.448 3769224.158 296.96
LOCATION L0000478    VOLUME    451476.409 3769223.123 297.19
LOCATION L0000479    VOLUME    451489.585 3769218.556 297.41
LOCATION L0000480    VOLUME    451502.668 3769213.573 297.56
LOCATION L0000481    VOLUME    451515.732 3769208.541 297.47
LOCATION L0000482    VOLUME    451528.782 3769203.470 297.27
LOCATION L0000483    VOLUME    451541.831 3769198.399 297.11
LOCATION L0000484    VOLUME    451554.880 3769193.328 297.17
LOCATION L0000485    VOLUME    451567.930 3769188.257 297.23
LOCATION L0000486    VOLUME    451581.055 3769183.424 297.30
LOCATION L0000487    VOLUME    451594.624 3769179.975 297.39
LOCATION L0000488    VOLUME    451608.418 3769177.970 297.39
LOCATION L0000489    VOLUME    451622.392 3769177.108 297.39
LOCATION L0000490    VOLUME    451630.984 3769182.754 297.63
LOCATION L0000491    VOLUME    451632.764 3769196.640 298.07
LOCATION L0000492    VOLUME    451633.816 3769210.571 298.48
LOCATION L0000493    VOLUME    451633.727 3769224.571 298.95
LOCATION L0000494    VOLUME    451633.638 3769238.570 299.44
LOCATION L0000495    VOLUME    451633.549 3769252.570 299.94
LOCATION L0000496    VOLUME    451633.460 3769266.570 300.44
LOCATION L0000497    VOLUME    451633.371 3769280.570 301.02
LOCATION L0000498    VOLUME    451633.282 3769294.569 301.79
LOCATION L0000499    VOLUME    451633.193 3769308.569 302.60
LOCATION L0000500    VOLUME    451633.104 3769322.569 303.59
LOCATION L0000501    VOLUME    451633.015 3769336.568 304.59
LOCATION L0000502    VOLUME    451632.926 3769350.568 305.92
LOCATION L0000503    VOLUME    451632.837 3769364.568 307.24
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       LOCATION L0000504      VOLUME     451632.773 3769378.567 307.33
       LOCATION L0000505      VOLUME     451633.006 3769392.566 307.21
       LOCATION L0000506      VOLUME     451633.239 3769406.564 306.54
       LOCATION L0000507      VOLUME     451633.472 3769420.562 305.68
       LOCATION L0000508      VOLUME     451633.706 3769434.560 305.17
       LOCATION L0000509      VOLUME     451633.939 3769448.558 304.90
       LOCATION L0000510      VOLUME     451634.172 3769462.556 304.97
       LOCATION L0000511      VOLUME     451634.406 3769476.554 305.44
       LOCATION L0000512      VOLUME     451634.673 3769490.551 305.91
       LOCATION L0000513      VOLUME     451635.043 3769504.546 306.38
       LOCATION L0000514      VOLUME     451635.414 3769518.541 306.72
       LOCATION L0000515      VOLUME     451635.784 3769532.536 306.47
       LOCATION L0000516      VOLUME     451636.155 3769546.532 306.23
       LOCATION L0000517      VOLUME     451636.525 3769560.527 306.34
       LOCATION L0000518      VOLUME     451636.896 3769574.522 306.46
       LOCATION L0000519      VOLUME     451637.266 3769588.517 306.97
       LOCATION L0000520      VOLUME     451637.636 3769602.512 307.53
       LOCATION L0000521      VOLUME     451637.869 3769616.509 307.71
       LOCATION L0000522      VOLUME     451637.869 3769630.509 307.75
       LOCATION L0000523      VOLUME     451637.869 3769644.509 307.23
       LOCATION L0000524      VOLUME     451637.869 3769658.509 306.32
       LOCATION L0000525      VOLUME     451637.869 3769672.509 305.61
       LOCATION L0000526      VOLUME     451637.869 3769686.509 305.13
       LOCATION L0000527      VOLUME     451637.869 3769700.509 304.74
       LOCATION L0000528      VOLUME     451637.869 3769714.509 304.53
       LOCATION L0000529      VOLUME     451637.869 3769728.509 304.39
       LOCATION L0000530      VOLUME     451637.869 3769742.509 304.60
       LOCATION L0000531      VOLUME     451637.869 3769756.509 304.80
       LOCATION L0000532      VOLUME     451637.869 3769770.509 305.06
       LOCATION L0000533      VOLUME     451637.884 3769784.509 305.33
       LOCATION L0000534      VOLUME     451638.348 3769798.501 306.17
       LOCATION L0000535      VOLUME     451638.812 3769812.493 307.08
       LOCATION L0000536      VOLUME     451639.276 3769826.486 307.41
       LOCATION L0000537      VOLUME     451639.740 3769840.478 307.50
       LOCATION L0000538      VOLUME     451640.205 3769854.470 307.84
       LOCATION L0000539      VOLUME     451640.669 3769868.462 308.36
       LOCATION L0000540      VOLUME     451641.133 3769882.455 308.51
       LOCATION L0000541      VOLUME     451641.597 3769896.447 308.19
       LOCATION L0000542      VOLUME     451642.061 3769910.439 307.84
** End of LINE VOLUME Source ID = SLINE3
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
       SRCPARAM L0000338      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000339      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000340      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000341      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000342      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000343      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000344      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000345      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000346      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000347      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000348      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000349      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000350      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000351      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000352      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000353      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000354      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000355      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000356      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000357      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000358      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000359      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000360      0.000001673       3.49       4.00       3.25
       SRCPARAM L0000361      0.000001673       3.49       4.00       3.25
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   SRCPARAM L0000362    0.000001673     3.49    4.00    3.25
   SRCPARAM L0000363    0.000001673     3.49    4.00    3.25
   SRCPARAM L0000364    0.000001673     3.49    4.00    3.25
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0000365    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000366    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000367    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000368    0.0000003222    3.49    4.00    3.25
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** ----------------------------------------------------------------------
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   SRCPARAM L0000423    0.0000001844    3.49    6.51    3.25
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    SRCPARAM L0000542     0.0000001844     3.49      6.51      3.25
** ----------------------------------------------------------------
    URBANSRC ALL
    SRCGROUP ALL
SO FINISHED
**
*****************************************
** AERMOD Receptor Pathway
*****************************************
**
**
RE STARTING
    INCLUDED "14539 Ops.rou"
RE FINISHED
```

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**
*****************************************
** AERMOD Meteorology Pathway
*****************************************
**
**
ME STARTING
   SURFFILE KONT_V9_ADJU\KONT_v9.SFC
   PROFFILE KONT_V9_ADJU\KONT_v9.PFL
   SURFDATA 3102 2012
   UAIRDATA 3190 2012
   PROFBASE 289.0 METERS
ME FINISHED
**
*****************************************
** AERMOD Output Pathway
*****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "14539 Ops.AD\AN00GALL.PLT" 31
   SUMMFILE "14539 Ops.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     540       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used        0.50
 ME W187     540       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

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

■■ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

                   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   205 Source(s),
  for Total of    1 Urban Area(s):
  Urban Population =   2035210.0 ;  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:    205 Source(s);        1 Source Group(s); and      47 Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and       0 POINTHOR(s)
                 and:    205 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 a total of     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) =   289.00 ;  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 =      3.6 MB of RAM.

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

**Detailed Error/Message File:   14539
Ops.err
**File for Summary of Results:   14539
```

Ops.sum

                   PAGE   2
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                       *** VOLUME SOURCE DATA ***

		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						

- -
- - - - - - - - - - - - - -

Source ID	Part.	Emission Rate	X	Y	Elev.	Height	SY	SZ	Vary By
L0000338	0	0.16730E-05	450588.6	3769293.5	298.6	3.49	4.00	3.25	YES
L0000339	0	0.16730E-05	450597.2	3769293.7	298.6	3.49	4.00	3.25	YES
L0000340	0	0.16730E-05	450605.7	3769294.0	298.6	3.49	4.00	3.25	YES
L0000341	0	0.16730E-05	450614.3	3769294.2	298.6	3.49	4.00	3.25	YES
L0000342	0	0.16730E-05	450622.9	3769294.5	298.6	3.49	4.00	3.25	YES
L0000343	0	0.16730E-05	450631.5	3769294.7	298.7	3.49	4.00	3.25	YES
L0000344	0	0.16730E-05	450640.1	3769295.0	298.7	3.49	4.00	3.25	YES
L0000345	0	0.16730E-05	450648.7	3769295.2	298.7	3.49	4.00	3.25	YES
L0000346	0	0.16730E-05	450657.3	3769295.5	298.7	3.49	4.00	3.25	YES
L0000347	0	0.16730E-05	450665.8	3769295.7	298.7	3.49	4.00	3.25	YES
L0000348	0	0.16730E-05	450674.4	3769296.0	298.7	3.49	4.00	3.25	YES
L0000349	0	0.16730E-05	450683.0	3769296.2	298.7	3.49	4.00	3.25	YES
L0000350	0	0.16730E-05	450691.6	3769296.5	298.7	3.49	4.00	3.25	YES
L0000351	0	0.16730E-05	450700.2	3769296.7	298.7	3.49	4.00	3.25	YES
L0000352	0	0.16730E-05	450708.8	3769297.0	298.7	3.49	4.00	3.25	YES
L0000353	0	0.16730E-05	450717.4	3769297.3	298.7	3.49	4.00	3.25	YES
L0000354	0	0.16730E-05	450726.0	3769297.5	298.6	3.49	4.00	3.25	YES
L0000355	0	0.16730E-05	450734.5	3769297.8	298.6	3.49	4.00	3.25	YES
L0000356	0	0.16730E-05	450743.1	3769298.0	298.6	3.49	4.00	3.25	YES
L0000357	0	0.16730E-05	450751.7	3769298.3	298.6	3.49	4.00	3.25	YES
L0000358	0	0.16730E-05	450760.3	3769298.5	298.6	3.49	4.00	3.25	YES
L0000359	0	0.16730E-05	450768.9	3769298.8	298.6	3.49	4.00	3.25	YES
L0000360	0	0.16730E-05	450777.5	3769299.0	298.6	3.49	4.00	3.25	

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YES
L0000361        0   0.16730E-05   450786.1 3769299.3    298.6     3.49    4.00     3.25
YES
L0000362        0   0.16730E-05   450794.6 3769299.5    298.6     3.49    4.00     3.25
YES
L0000363        0   0.16730E-05   450803.2 3769299.8    298.6     3.49    4.00     3.25
YES
L0000364        0   0.16730E-05   450811.8 3769300.0    298.6     3.49    4.00     3.25
YES
L0000365        0   0.32220E-06   450532.1 3769248.3    298.4     3.49    4.00     3.25
YES
L0000366        0   0.32220E-06   450532.1 3769256.9    298.5     3.49    4.00     3.25
YES
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YES
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YES
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YES
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YES
L0000372        0   0.32220E-06   450578.9 3769261.9    298.6     3.49    4.00     3.25
YES
L0000373        0   0.32220E-06   450585.7 3769266.4    298.5     3.49    4.00     3.25
YES
L0000374        0   0.32220E-06   450591.6 3769272.5    298.4     3.49    4.00     3.25
YES
L0000375        0   0.32220E-06   450599.3 3769274.8    298.4     3.49    4.00     3.25
YES
L0000376        0   0.32220E-06   450607.9 3769275.0    298.4     3.49    4.00     3.25
YES
L0000377        0   0.32220E-06   450616.5 3769275.1    298.5     3.49    4.00     3.25
YES
```

FF *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                          *** VOLUME SOURCE DATA ***

              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
- -
- - - - - - - - - - - - -

L0000378   0   0.32220E-06   450625.1 3769275.3   298.6   3.49   4.00   3.25
YES
L0000379   0   0.32220E-06   450633.7 3769275.5   298.7   3.49   4.00   3.25
YES
L0000380   0   0.32220E-06   450642.3 3769275.6   298.7   3.49   4.00   3.25
YES
L0000381   0   0.32220E-06   450650.8 3769275.8   298.7   3.49   4.00   3.25
YES
L0000382   0   0.32220E-06   450659.4 3769276.0   298.7   3.49   4.00   3.25
YES
L0000383   0   0.32220E-06   450668.0 3769276.2   298.7   3.49   4.00   3.25
```

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YES
L0000384           0   0.32220E-06   450676.6 3769276.3   298.7   3.49   4.00   3.25
YES
L0000385           0   0.32220E-06   450685.2 3769276.5   298.7   3.49   4.00   3.25
YES
L0000386           0   0.32220E-06   450693.8 3769276.7   298.7   3.49   4.00   3.25
YES
L0000387           0   0.32220E-06   450702.4 3769276.8   298.7   3.49   4.00   3.25
YES
L0000388           0   0.32220E-06   450711.0 3769277.0   298.6   3.49   4.00   3.25
YES
L0000389           0   0.32220E-06   450719.5 3769277.2   298.5   3.49   4.00   3.25
YES
L0000390           0   0.32220E-06   450728.1 3769277.3   298.4   3.49   4.00   3.25
YES
L0000391           0   0.32220E-06   450736.7 3769277.5   298.4   3.49   4.00   3.25
YES
L0000392           0   0.32220E-06   450745.3 3769277.7   298.4   3.49   4.00   3.25
YES
L0000393           0   0.32220E-06   450753.9 3769277.8   298.4   3.49   4.00   3.25
YES
L0000394           0   0.32220E-06   450762.5 3769278.0   298.4   3.49   4.00   3.25
YES
L0000395           0   0.32220E-06   450771.1 3769278.2   298.3   3.49   4.00   3.25
YES
L0000396           0   0.32220E-06   450779.7 3769278.3   298.2   3.49   4.00   3.25
YES
L0000397           0   0.32220E-06   450788.2 3769277.7   298.1   3.49   4.00   3.25
YES
L0000398           0   0.32220E-06   450796.8 3769276.8   298.1   3.49   4.00   3.25
YES
L0000399           0   0.32220E-06   450805.3 3769275.9   298.1   3.49   4.00   3.25
YES
L0000400           0   0.32220E-06   450813.9 3769275.0   298.1   3.49   4.00   3.25
YES
L0000401           0   0.32220E-06   450822.4 3769274.3   298.1   3.49   4.00   3.25
YES
L0000402           0   0.32220E-06   450831.0 3769274.3   298.2   3.49   4.00   3.25
YES
L0000403           0   0.32220E-06   450839.6 3769274.2   298.3   3.49   4.00   3.25
YES
L0000404           0   0.32220E-06   450848.2 3769274.2   298.4   3.49   4.00   3.25
YES
L0000405           0   0.32220E-06   450856.8 3769274.1   298.4   3.49   4.00   3.25
YES
L0000406           0   0.32220E-06   450865.4 3769274.0   298.5   3.49   4.00   3.25
YES
L0000407           0   0.32220E-06   450873.9 3769274.0   298.6   3.49   4.00   3.25
YES
L0000408           0   0.32220E-06   450875.5 3769266.8   298.5   3.49   4.00   3.25
YES
L0000409           0   0.32220E-06   450875.8 3769258.2   298.3   3.49   4.00   3.25
YES
L0000410           0   0.32220E-06   450876.0 3769249.6   298.2   3.49   4.00   3.25
YES
L0000411           0   0.18440E-06   450538.5 3769231.7   298.4   3.49   6.51   3.25
YES
L0000412           0   0.18440E-06   450552.5 3769231.6   298.4   3.49   6.51   3.25
YES
L0000413           0   0.18440E-06   450566.5 3769231.5   298.6   3.49   6.51   3.25
YES
L0000414           0   0.18440E-06   450580.5 3769231.4   298.7   3.49   6.51   3.25
YES
L0000415           0   0.18440E-06   450594.5 3769231.3   298.7   3.49   6.51   3.25
YES
L0000416           0   0.18440E-06   450608.5 3769231.2   298.7   3.49   6.51   3.25
```

YES
L0000417   0   0.18440E-06   450622.5 3769231.1   298.7   3.49   6.51   3.25
YES

███ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                            *** VOLUME SOURCE DATA ***

              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
- -
- - - - - - - - - - - - -

L0000418   0   0.18440E-06   450636.5 3769231.0   298.7   3.49   6.51   3.25
YES
L0000419   0   0.18440E-06   450650.5 3769230.8   298.7   3.49   6.51   3.25
YES
L0000420   0   0.18440E-06   450664.5 3769230.7   298.7   3.49   6.51   3.25
YES
L0000421   0   0.18440E-06   450678.5 3769230.6   298.6   3.49   6.51   3.25
YES
L0000422   0   0.18440E-06   450692.5 3769230.5   298.5   3.49   6.51   3.25
YES
L0000423   0   0.18440E-06   450706.5 3769230.4   298.4   3.49   6.51   3.25
YES
L0000424   0   0.18440E-06   450720.5 3769230.3   298.4   3.49   6.51   3.25
YES
L0000425   0   0.18440E-06   450734.5 3769230.2   298.4   3.49   6.51   3.25
YES
L0000426   0   0.18440E-06   450748.5 3769230.1   298.4   3.49   6.51   3.25
YES
L0000427   0   0.18440E-06   450762.5 3769230.0   298.4   3.49   6.51   3.25
YES
L0000428   0   0.18440E-06   450776.5 3769229.8   298.4   3.49   6.51   3.25
YES
L0000429   0   0.18440E-06   450790.5 3769229.7   298.4   3.49   6.51   3.25
YES
L0000430   0   0.18440E-06   450804.5 3769229.6   298.4   3.49   6.51   3.25
YES
L0000431   0   0.18440E-06   450818.5 3769229.5   298.4   3.49   6.51   3.25
YES
L0000432   0   0.18440E-06   450832.5 3769229.4   298.3   3.49   6.51   3.25
YES
L0000433   0   0.18440E-06   450846.5 3769229.3   298.3   3.49   6.51   3.25
YES
L0000434   0   0.18440E-06   450860.5 3769229.2   298.1   3.49   6.51   3.25
YES
L0000435   0   0.18440E-06   450874.5 3769229.1   297.8   3.49   6.51   3.25
YES
L0000436   0   0.18440E-06   450888.5 3769229.0   297.7   3.49   6.51   3.25
YES
L0000437   0   0.18440E-06   450902.5 3769228.9   297.7   3.49   6.51   3.25
YES
L0000438   0   0.18440E-06   450916.5 3769228.7   297.7   3.49   6.51   3.25
YES
L0000439   0   0.18440E-06   450930.5 3769228.6   297.6   3.49   6.51   3.25

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YES
L0000440           0   0.18440E-06  450944.5 3769228.5    297.5     3.49     6.51     3.25
YES
L0000441           0   0.18440E-06  450958.5 3769228.4    297.4     3.49     6.51     3.25
YES
L0000442           0   0.18440E-06  450972.5 3769228.3    297.2     3.49     6.51     3.25
YES
L0000443           0   0.18440E-06  450986.5 3769228.2    297.2     3.49     6.51     3.25
YES
L0000444           0   0.18440E-06  451000.5 3769228.1    297.1     3.49     6.51     3.25
YES
L0000445           0   0.18440E-06  451014.5 3769228.0    297.1     3.49     6.51     3.25
YES
L0000446           0   0.18440E-06  451028.5 3769227.9    297.0     3.49     6.51     3.25
YES
L0000447           0   0.18440E-06  451042.5 3769227.8    296.9     3.49     6.51     3.25
YES
L0000448           0   0.18440E-06  451056.5 3769227.6    296.8     3.49     6.51     3.25
YES
L0000449           0   0.18440E-06  451070.5 3769227.5    296.8     3.49     6.51     3.25
YES
L0000450           0   0.18440E-06  451084.5 3769227.4    296.7     3.49     6.51     3.25
YES
L0000451           0   0.18440E-06  451098.5 3769227.3    296.7     3.49     6.51     3.25
YES
L0000452           0   0.18440E-06  451112.5 3769227.2    296.7     3.49     6.51     3.25
YES
L0000453           0   0.18440E-06  451126.5 3769227.1    296.6     3.49     6.51     3.25
YES
L0000454           0   0.18440E-06  451140.5 3769227.0    296.5     3.49     6.51     3.25
YES
L0000455           0   0.18440E-06  451154.5 3769226.9    296.5     3.49     6.51     3.25
YES
L0000456           0   0.18440E-06  451168.5 3769226.8    296.4     3.49     6.51     3.25
YES
L0000457           0   0.18440E-06  451182.5 3769226.6    296.4     3.49     6.51     3.25
YES
```

[FF] *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
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 *** MODELOPTs: RegDFAULT CONC   ELEV   URBAN   ADJ_U*

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


            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
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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L0000458           0   0.18440E-06  451196.5 3769226.5    296.4     3.49     6.51     3.25
YES
L0000459           0   0.18440E-06  451210.5 3769226.4    296.4     3.49     6.51     3.25
YES
L0000460           0   0.18440E-06  451224.5 3769226.3    296.3     3.49     6.51     3.25
YES
L0000461           0   0.18440E-06  451238.5 3769226.2    296.3     3.49     6.51     3.25
YES
L0000462           0   0.18440E-06  451252.5 3769226.1    296.2     3.49     6.51     3.25
```

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YES
L0000463        0   0.18440E-06   451266.5 3769226.0   296.1     3.49     6.51     3.25
YES
L0000464        0   0.18440E-06   451280.5 3769225.9   295.9     3.49     6.51     3.25
YES
L0000465        0   0.18440E-06   451294.5 3769225.8   295.8     3.49     6.51     3.25
YES
L0000466        0   0.18440E-06   451308.5 3769225.7   295.7     3.49     6.51     3.25
YES
L0000467        0   0.18440E-06   451322.5 3769225.5   295.5     3.49     6.51     3.25
YES
L0000468        0   0.18440E-06   451336.5 3769225.4   295.5     3.49     6.51     3.25
YES
L0000469        0   0.18440E-06   451350.5 3769225.3   295.7     3.49     6.51     3.25
YES
L0000470        0   0.18440E-06   451364.5 3769225.2   295.9     3.49     6.51     3.25
YES
L0000471        0   0.18440E-06   451378.5 3769225.1   296.1     3.49     6.51     3.25
YES
L0000472        0   0.18440E-06   451392.5 3769225.0   296.4     3.49     6.51     3.25
YES
L0000473        0   0.18440E-06   451406.5 3769224.9   296.5     3.49     6.51     3.25
YES
L0000474        0   0.18440E-06   451420.5 3769224.8   296.6     3.49     6.51     3.25
YES
L0000475        0   0.18440E-06   451434.5 3769224.7   296.7     3.49     6.51     3.25
YES
L0000476        0   0.18440E-06   451448.5 3769224.6   296.7     3.49     6.51     3.25
YES
L0000477        0   0.18440E-06   451462.4 3769224.2   297.0     3.49     6.51     3.25
YES
L0000478        0   0.18440E-06   451476.4 3769223.1   297.2     3.49     6.51     3.25
YES
L0000479        0   0.18440E-06   451489.6 3769218.6   297.4     3.49     6.51     3.25
YES
L0000480        0   0.18440E-06   451502.7 3769213.6   297.6     3.49     6.51     3.25
YES
L0000481        0   0.18440E-06   451515.7 3769208.5   297.5     3.49     6.51     3.25
YES
L0000482        0   0.18440E-06   451528.8 3769203.5   297.3     3.49     6.51     3.25
YES
L0000483        0   0.18440E-06   451541.8 3769198.4   297.1     3.49     6.51     3.25
YES
L0000484        0   0.18440E-06   451554.9 3769193.3   297.2     3.49     6.51     3.25
YES
L0000485        0   0.18440E-06   451567.9 3769188.3   297.2     3.49     6.51     3.25
YES
L0000486        0   0.18440E-06   451581.1 3769183.4   297.3     3.49     6.51     3.25
YES
L0000487        0   0.18440E-06   451594.6 3769180.0   297.4     3.49     6.51     3.25
YES
L0000488        0   0.18440E-06   451608.4 3769178.0   297.4     3.49     6.51     3.25
YES
L0000489        0   0.18440E-06   451622.4 3769177.1   297.4     3.49     6.51     3.25
YES
L0000490        0   0.18440E-06   451631.0 3769182.8   297.6     3.49     6.51     3.25
YES
L0000491        0   0.18440E-06   451632.8 3769196.6   298.1     3.49     6.51     3.25
YES
L0000492        0   0.18440E-06   451633.8 3769210.6   298.5     3.49     6.51     3.25
YES
L0000493        0   0.18440E-06   451633.7 3769224.6   298.9     3.49     6.51     3.25
YES
L0000494        0   0.18440E-06   451633.6 3769238.6   299.4     3.49     6.51     3.25
YES
L0000495        0   0.18440E-06   451633.5 3769252.6   299.9     3.49     6.51     3.25
```

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     YES
L0000496           0   0.18440E-06   451633.5 3769266.6    300.4    3.49    6.51    3.25
     YES
L0000497           0   0.18440E-06   451633.4 3769280.6    301.0    3.49    6.51    3.25
     YES
```

■■ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                            *** VOLUME SOURCE DATA ***

SOURCE ID (METERS)	NUMBER URBAN PART. SOURCE SCALAR CATS.	EMISSION RATE EMISSION RATE (GRAMS/SEC) VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ
L0000498	0	0.18440E-06	451633.3	3769294.6	301.8	3.49	6.51	3.25
YES								
L0000499	0	0.18440E-06	451633.2	3769308.6	302.6	3.49	6.51	3.25
YES								
L0000500	0	0.18440E-06	451633.1	3769322.6	303.6	3.49	6.51	3.25
YES								
L0000501	0	0.18440E-06	451633.0	3769336.6	304.6	3.49	6.51	3.25
YES								
L0000502	0	0.18440E-06	451632.9	3769350.6	305.9	3.49	6.51	3.25
YES								
L0000503	0	0.18440E-06	451632.8	3769364.6	307.2	3.49	6.51	3.25
YES								
L0000504	0	0.18440E-06	451632.8	3769378.6	307.3	3.49	6.51	3.25
YES								
L0000505	0	0.18440E-06	451633.0	3769392.6	307.2	3.49	6.51	3.25
YES								
L0000506	0	0.18440E-06	451633.2	3769406.6	306.5	3.49	6.51	3.25
YES								
L0000507	0	0.18440E-06	451633.5	3769420.6	305.7	3.49	6.51	3.25
YES								
L0000508	0	0.18440E-06	451633.7	3769434.6	305.2	3.49	6.51	3.25
YES								
L0000509	0	0.18440E-06	451633.9	3769448.6	304.9	3.49	6.51	3.25
YES								
L0000510	0	0.18440E-06	451634.2	3769462.6	305.0	3.49	6.51	3.25
YES								
L0000511	0	0.18440E-06	451634.4	3769476.6	305.4	3.49	6.51	3.25
YES								
L0000512	0	0.18440E-06	451634.7	3769490.6	305.9	3.49	6.51	3.25
YES								
L0000513	0	0.18440E-06	451635.0	3769504.5	306.4	3.49	6.51	3.25
YES								
L0000514	0	0.18440E-06	451635.4	3769518.5	306.7	3.49	6.51	3.25
YES								
L0000515	0	0.18440E-06	451635.8	3769532.5	306.5	3.49	6.51	3.25
YES								
L0000516	0	0.18440E-06	451636.2	3769546.5	306.2	3.49	6.51	3.25
YES								
L0000517	0	0.18440E-06	451636.5	3769560.5	306.3	3.49	6.51	3.25
YES								
L0000518	0	0.18440E-06	451636.9	3769574.5	306.5	3.49	6.51	3.25

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YES
L0000519          0   0.18440E-06  451637.3 3769588.5   307.0    3.49    6.51    3.25
YES
L0000520          0   0.18440E-06  451637.6 3769602.5   307.5    3.49    6.51    3.25
YES
L0000521          0   0.18440E-06  451637.9 3769616.5   307.7    3.49    6.51    3.25
YES
L0000522          0   0.18440E-06  451637.9 3769630.5   307.8    3.49    6.51    3.25
YES
L0000523          0   0.18440E-06  451637.9 3769644.5   307.2    3.49    6.51    3.25
YES
L0000524          0   0.18440E-06  451637.9 3769658.5   306.3    3.49    6.51    3.25
YES
L0000525          0   0.18440E-06  451637.9 3769672.5   305.6    3.49    6.51    3.25
YES
L0000526          0   0.18440E-06  451637.9 3769686.5   305.1    3.49    6.51    3.25
YES
L0000527          0   0.18440E-06  451637.9 3769700.5   304.7    3.49    6.51    3.25
YES
L0000528          0   0.18440E-06  451637.9 3769714.5   304.5    3.49    6.51    3.25
YES
L0000529          0   0.18440E-06  451637.9 3769728.5   304.4    3.49    6.51    3.25
YES
L0000530          0   0.18440E-06  451637.9 3769742.5   304.6    3.49    6.51    3.25
YES
L0000531          0   0.18440E-06  451637.9 3769756.5   304.8    3.49    6.51    3.25
YES
L0000532          0   0.18440E-06  451637.9 3769770.5   305.1    3.49    6.51    3.25
YES
L0000533          0   0.18440E-06  451637.9 3769784.5   305.3    3.49    6.51    3.25
YES
L0000534          0   0.18440E-06  451638.3 3769798.5   306.2    3.49    6.51    3.25
YES
L0000535          0   0.18440E-06  451638.8 3769812.5   307.1    3.49    6.51    3.25
YES
L0000536          0   0.18440E-06  451639.3 3769826.5   307.4    3.49    6.51    3.25
YES
L0000537          0   0.18440E-06  451639.7 3769840.5   307.5    3.49    6.51    3.25
YES
```

FF *** AERMOD - VERSION 21112   ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
*** AERMET - VERSION 16216 ***
***   ***   11:35:02

                    PAGE   7
*** MODELOPTs: RegDFAULT CONC   ELEV   URBAN   ADJ_U*

                                        *** VOLUME SOURCE DATA ***

             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
- -
- - - - - - - - - - - - -

L0000538   0   0.18440E-06 451640.2 3769854.5   307.8   3.49   6.51   3.25
YES
L0000539   0   0.18440E-06 451640.7 3769868.5   308.4   3.49   6.51   3.25
YES
L0000540   0   0.18440E-06 451641.1 3769882.5   308.5   3.49   6.51   3.25
YES
L0000541   0   0.18440E-06 451641.6 3769896.4   308.2   3.49   6.51   3.25
```

```
 YES
 L0000542          0   0.18440E-06   451642.1 3769910.4   307.8      3.49      6.51      3.25
 YES
```
■■ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

                    PAGE   8
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

```
                                       *** SOURCE IDs DEFINING SOURCE GROUPS ***

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


  ALL        L0000338   , L0000339    , L0000340    , L0000341    , L0000342    , L0000343    ,
  L0000344   , L0000345    ,

             L0000346   , L0000347    , L0000348    , L0000349    , L0000350    , L0000351    ,
             L0000352   , L0000353    ,

             L0000354   , L0000355    , L0000356    , L0000357    , L0000358    , L0000359    ,
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             L0000402   , L0000403    , L0000404    , L0000405    , L0000406    , L0000407    ,
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        L0000488    , L0000489    ,

        L0000490    , L0000491    , L0000492    , L0000493    , L0000494    , L0000495    ,
        L0000496    , L0000497    ,
```

*** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

                   PAGE   9
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                              *** SOURCE IDs DEFINING SOURCE GROUPS ***

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


```
        L0000498    , L0000499    , L0000500    , L0000501    , L0000502    , L0000503    ,
        L0000504    , L0000505    ,

        L0000506    , L0000507    , L0000508    , L0000509    , L0000510    , L0000511    ,
        L0000512    , L0000513    ,

        L0000514    , L0000515    , L0000516    , L0000517    , L0000518    , L0000519    ,
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        L0000522    , L0000523    , L0000524    , L0000525    , L0000526    , L0000527    ,
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        L0000530    , L0000531    , L0000532    , L0000533    , L0000534    , L0000535    ,
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        L0000538    , L0000539    , L0000540    , L0000541    , L0000542    ,
```
*** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
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                   PAGE 10
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

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


```
        2035210.  L0000338    , L0000339    , L0000340    , L0000341    , L0000342    ,
        L0000343    , L0000344    ,
L0000345    ,

        L0000346    , L0000347    , L0000348    , L0000349    , L0000350    , L0000351    ,
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L0000384    , L0000385    ,

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L0000402    , L0000403    , L0000404    , L0000405    , L0000406    , L0000407    ,
L0000408    , L0000409    ,

L0000410    , L0000411    , L0000412    , L0000413    , L0000414    , L0000415    ,
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L0000472    , L0000473    ,

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L0000480    , L0000481    ,

L0000482    , L0000483    , L0000484    , L0000485    , L0000486    , L0000487    ,
L0000488    , L0000489    ,

L0000490    , L0000491    , L0000492    , L0000493    , L0000494    , L0000495    ,
L0000496    , L0000497    ,
```

🄵🄵 *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

            PAGE 11
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

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

```
       L0000498      , L0000499      , L0000500      , L0000501      , L0000502      , L0000503      ,
       L0000504      , L0000505      ,

       L0000506      , L0000507      , L0000508      , L0000509      , L0000510      , L0000511      ,
       L0000512      , L0000513      ,

       L0000514      , L0000515      , L0000516      , L0000517      , L0000518      , L0000519      ,
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       L0000538      , L0000539      , L0000540      , L0000541      , L0000542      ,
```

FF *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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


   ( 450497.4, 3769490.5,     301.2,       301.2,        0.0);        ( 450800.7, 3769496.4,
     301.2,      301.2,        0.0);
   ( 450844.7, 3769482.7,     300.8,       300.8,        0.0);        ( 450443.3, 3769464.3,
     300.9,      300.9,        0.0);
   ( 450501.5, 3769327.5,     299.2,       299.2,        0.0);        ( 450500.6, 3769279.8,
     298.7,      298.7,        0.0);
   ( 450904.5, 3769273.6,     298.7,       298.7,        0.0);        ( 450904.5, 3769256.7,
     298.3,      298.3,        0.0);
   ( 451224.7, 3769252.7,     296.5,       296.5,        0.0);        ( 451223.3, 3769282.5,
     297.0,      297.0,        0.0);
   ( 451085.8, 3769299.7,     297.7,       297.7,        0.0);        ( 451203.8, 3769285.4,
     297.1,      297.1,        0.0);
   ( 450660.4, 3769097.0,     298.3,       298.3,        0.0);        ( 451202.0, 3769091.5,
     294.3,      294.3,        0.0);
   ( 450843.3, 3769093.9,     296.0,       296.0,        0.0);        ( 451065.3, 3769091.5,
     295.0,      295.0,        0.0);
   ( 450488.4, 3769125.6,     297.5,       297.5,        0.0);        ( 450365.0, 3769200.8,
     297.4,      297.4,        0.0);
   ( 449491.0, 3769987.6,     306.4,       306.4,        0.0);        ( 451310.5, 3769494.7,
     298.9,      298.9,        0.0);
   ( 451571.6, 3769299.6,     300.9,       300.9,        0.0);        ( 451412.2, 3769298.4,
     297.6,      297.6,        0.0);
   ( 451467.2, 3769186.0,     296.7,       296.7,        0.0);        ( 449272.9, 3769950.8,
     304.9,      304.9,        0.0);
   ( 449463.3, 3769963.2,     305.9,       305.9,        0.0);        ( 449418.9, 3769937.8,
     305.4,      305.4,        0.0);
   ( 449134.5, 3770074.5,     305.9,       305.9,        0.0);        ( 448757.9, 3770086.1,
     305.4,      305.4,        0.0);
   ( 451123.0, 3769118.2,     295.2,       295.2,        0.0);        ( 453236.6, 3767558.9,
     279.1,      279.1,        0.0);
   ( 453308.3, 3767535.1,     279.2,       279.2,        0.0);        ( 453281.0, 3767662.3,
     280.5,      280.5,        0.0);
   ( 453784.7, 3767275.2,     274.3,       274.3,        0.0);        ( 453764.7, 3767244.9,
     273.9,      273.9,        0.0);
   ( 448293.4, 3770898.6,     316.0,       316.0,        0.0);        ( 448374.2, 3771008.4,
     318.1,      318.1,        0.0);
   ( 448407.8, 3771051.1,     318.9,       318.9,        0.0);        ( 451567.7, 3769513.9,
     304.1,      304.1,        0.0);
```

```
( 451567.3, 3769558.7,     304.5,     304.5,     0.0);          ( 451504.3, 3769499.8,
  301.8,     301.8,     0.0);
( 451404.2, 3769478.0,     299.6,     299.6,     0.0);          ( 451080.2, 3769366.8,
  298.5,     298.5,     0.0);
( 451083.4, 3769345.3,     298.2,     298.2,     0.0);          ( 451855.6, 3769413.3,
  300.9,     300.9,     0.0);
( 451858.8, 3769297.5,     299.2,     299.2,     0.0);          ( 451877.2, 3769588.2,
  303.3,     303.3,     0.0);
( 451769.8, 3769173.3,     296.9,     296.9,
  0.0);
```

                    PAGE 13
 *** 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 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,

                    PAGE 14
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

   Surface file:
   KONT_V9_ADJU\KONT_v9.SFC   Met
   Version: 16216
   Profile file:
   KONT_V9_ADJU\KONT_v9.PFL
   Surface format:
   FREE

   Profile format:

```
    FREE

   Surface station no.:    3102                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  -16.4  0.171 -9.000 -9.000 -999.  170.      32.3  0.09   1.12   1.00     2.03
 43.    7.9  285.9    2.0
 12 01 01   1 02  -18.8  0.194 -9.000 -9.000 -999.  205.      41.3  0.09   1.12   1.00     2.28
 34.    7.9  285.4    2.0
 12 01 01   1 03  -17.8  0.182 -9.000 -9.000 -999.  187.      36.5  0.09   1.12   1.00     2.15
 24.    7.9  282.0    2.0
 12 01 01   1 04   -9.4  0.128 -9.000 -9.000 -999.  110.      19.6  0.09   1.12   1.00     1.55
 41.    7.9  283.1    2.0
 12 01 01   1 05  -16.9  0.173 -9.000 -9.000 -999.  173.      33.0  0.09   1.12   1.00     2.05
 39.    7.9  280.4    2.0
 12 01 01   1 06   -8.0  0.117 -9.000 -9.000 -999.   97.      17.8  0.09   1.12   1.00     1.43
 21.    7.9  282.0    2.0
 12 01 01   1 07   -7.6  0.115 -9.000 -9.000 -999.   93.      17.4  0.09   1.12   1.00     1.40
 31.    7.9  282.5    2.0
 12 01 01   1 08  -13.6  0.184 -9.000 -9.000 -999.  190.      40.5  0.09   1.12   0.54     2.16
 34.    7.9  284.2    2.0
 12 01 01   1 09   28.4  0.126  0.300  0.011   33.  108.      -6.2  0.09   1.12   0.32     1.03
 29.    7.9  289.2    2.0
 12 01 01   1 10   79.8  0.133  0.607  0.010   99.  116.      -2.6  0.09   1.12   0.25     0.94
 173.    7.9  292.5    2.0
 12 01 01   1 11  115.8  0.137  0.932  0.006  246.  121.      -2.0  0.09   1.12   0.22     0.92
 172.    7.9  295.4    2.0
 12 01 01   1 12  133.7  0.139  1.197  0.005  453.  125.      -1.8  0.09   1.12   0.21     0.92
 146.    7.9  297.5    2.0
 12 01 01   1 13  133.2  0.160  1.354  0.005  657.  153.      -2.7  0.09   1.12   0.21     1.14
 117.    7.9  299.9    2.0
 12 01 01   1 14  113.5  0.159  1.454  0.005  955.  151.      -3.1  0.09   1.12   0.23     1.16
 285.    7.9  300.9    2.0
 12 01 01   1 15   76.2  0.166  1.350  0.005 1138.  163.      -5.3  0.09   1.12   0.26     1.33
 72.    7.9  302.0    2.0
 12 01 01   1 16   23.5  0.175  0.925  0.005 1183.  175.     -19.9  0.09   1.12   0.35     1.65
 107.    7.9  301.4    2.0
 12 01 01   1 17   -6.1  0.107 -9.000 -9.000 -999.   86.      18.0  0.09   1.12   0.63     1.31
 107.    7.9  298.1    2.0
 12 01 01   1 18  -11.1  0.141 -9.000 -9.000 -999.  127.      22.1  0.09   1.12   1.00     1.69
 86.    7.9  293.1    2.0
 12 01 01   1 19   -3.2  0.076 -9.000 -9.000 -999.   51.      11.8  0.09   1.12   1.00     0.91
 64.    7.9  292.0    2.0
 12 01 01   1 20   -2.3  0.066 -9.000 -9.000 -999.   41.      11.2  0.09   1.12   1.00     0.74
 73.    7.9  288.8    2.0
 12 01 01   1 21  -10.0  0.133 -9.000 -9.000 -999.  116.      20.5  0.09   1.12   1.00     1.60
 14.    7.9  288.1    2.0
 12 01 01   1 22  -19.4  0.201 -9.000 -9.000 -999.  216.      44.5  0.09   1.12   1.00     2.36
 22.    7.9  287.5    2.0
 12 01 01   1 23  -23.7  0.246 -9.000 -9.000 -999.  293.      66.5  0.09   1.12   1.00     2.86
 40.    7.9  287.0    2.0
 12 01 01   1 24  -12.3  0.147 -9.000 -9.000 -999.  139.      23.8  0.09   1.12   1.00     1.76
 40.    7.9  283.8    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 12 01 01 01    7.9 1   43.    2.03   286.0   99.0  -99.00  -99.00
```

 F indicates top of profile (=1) or below (=0)
 ▪▪ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

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

                          *** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   5 YEARS FOR
                          SOURCE GROUP: ALL   ***
                                        INCLUDING SOURCE(S):   L0000338   , L0000339   ,
                                        L0000340   , L0000341   , L0000342   ,
                  L0000343   , L0000344   , L0000345   , L0000346   , L0000347   ,
                  L0000348   , L0000349   , L0000350   ,
                  L0000351   , L0000352   , L0000353   , L0000354   , L0000355   ,
                  L0000356   , L0000357   , L0000358   ,
                  L0000359   , L0000360   , L0000361   , L0000362   , L0000363   ,
                  L0000364   , L0000365   , . . .   ,

                                      *** 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
- -
- - - - - - - - - - - - - -
       450497.39   3769490.46   0.00050   450800.72
       3769496.41   0.00096
       450844.74   3769482.73   0.00110   450443.26
       3769464.29   0.00045
       450501.53   3769327.46   0.00126   450500.56
       3769279.81   0.00163
       450904.52   3769273.57   0.00417   450904.52
       3769256.68   0.00368
       451224.66   3769252.72   0.00132   451223.34
       3769282.54   0.00101
       451085.83   3769299.70   0.00132   451203.81
       3769285.44   0.00103
       450660.39   3769097.00   0.00113   451201.96
       3769091.46   0.00042
       450843.34   3769093.95   0.00086   451065.35
       3769091.46   0.00051
       450488.39   3769125.56   0.00087   450365.04
       3769200.78   0.00048
       449490.95   3769987.56   0.00003   451310.46
       3769494.69   0.00061
       451571.63   3769299.56   0.00077   451412.20
       3769298.37   0.00076
       451467.16   3769185.97   0.00080   449272.92
       3769950.83   0.00003
       449463.32   3769963.25   0.00003   449418.90
       3769937.78   0.00003
       449134.45   3770074.53   0.00002   448757.86
       3770086.14   0.00002
       451123.04   3769118.25   0.00054   453236.59
       3767558.94   0.00001
       453308.35   3767535.11   0.00001   453281.04
       3767662.29   0.00001
       453784.70   3767275.20   0.00001   453764.70
       3767244.94   0.00001
       448293.38   3770898.58   0.00001   448374.25
       3771008.42   0.00001
       448407.77   3771051.14   0.00001   451567.70

```
3769513.90        0.00065
451567.29    3769558.70        0.00063                      451504.33
3769499.78        0.00054
451404.23    3769477.98        0.00056                      451080.25
3769366.84        0.00131
451083.41    3769345.35        0.00132                      451855.58
3769413.29        0.00038
451858.79    3769297.51        0.00034                      451877.19
3769588.22        0.00036
451769.79    3769173.32
0.00032
```

▟▙ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
  ***   ***   11:35:02

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

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

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

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

ALL   1ST HIGHEST VALUE IS   0.00417 AT (450904.52, 3769273.57,   298.65,
298.65,   0.00) DC
         2ND HIGHEST VALUE IS   0.00368 AT (450904.52, 3769256.68,   298.30,
         298.30,   0.00) DC
         3RD HIGHEST VALUE IS   0.00163 AT (450500.56, 3769279.81,   298.74,
         298.74,   0.00) DC
         4TH HIGHEST VALUE IS   0.00132 AT (451085.83, 3769299.70,   297.72,
         297.72,   0.00) DC
         5TH HIGHEST VALUE IS   0.00132 AT (451083.41, 3769345.35,   298.25,
         298.25,   0.00) DC
         6TH HIGHEST VALUE IS   0.00132 AT (451224.66, 3769252.72,   296.51,
         296.51,   0.00) DC
         7TH HIGHEST VALUE IS   0.00131 AT (451080.25, 3769366.84,   298.50,
         298.50,   0.00) DC
         8TH HIGHEST VALUE IS   0.00126 AT (450501.53, 3769327.46,   299.22,
         299.22,   0.00) DC
         9TH HIGHEST VALUE IS   0.00113 AT (450660.39, 3769097.00,   298.29,
         298.29,   0.00) DC
         10TH HIGHEST VALUE IS   0.00110 AT (450844.74, 3769482.73,   300.84,
         300.84,   0.00) DC

 *** RECEPTOR TYPES: GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
▟▙ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
  ***   ***   11:35:02

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```
*** 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         1628 Informational Message(s)

A Total of        43848 Hours Were Processed

A Total of         1278 Calm Hours Identified

A Total of          350 Missing Hours Identified (  0.80 Percent)


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


    ********    WARNING MESSAGES    ********
ME W186     540      MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used        0.50
ME W187     540      MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

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

```
**
*****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 8/23/2022
** File: C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE Distribution\14539 Ops\14539 Ops.ADI
**
*****************************************
**
**
*****************************************
** AERMOD Control Pathway
*****************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE Distribution\14539 Ops
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2035210 San_Bernadino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "14539 Ops.err"
CO FINISHED
**
*****************************************
** AERMOD Source Pathway
*****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ---------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Idling
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00004517
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 450584.276, 3769293.332, 298.63, 3.49, 4.00
** 450819.830, 3769300.271, 298.67, 3.49, 4.00
** ---------------------------------------------------------------------
   LOCATION L0000338      VOLUME    450588.570 3769293.458 298.57
   LOCATION L0000339      VOLUME    450597.156 3769293.711 298.58
   LOCATION L0000340      VOLUME    450605.742 3769293.964 298.58
   LOCATION L0000341      VOLUME    450614.328 3769294.217 298.60
   LOCATION L0000342      VOLUME    450622.915 3769294.470 298.64
   LOCATION L0000343      VOLUME    450631.501 3769294.723 298.67
   LOCATION L0000344      VOLUME    450640.087 3769294.976 298.70
   LOCATION L0000345      VOLUME    450648.673 3769295.229 298.70
   LOCATION L0000346      VOLUME    450657.260 3769295.482 298.70
   LOCATION L0000347      VOLUME    450665.846 3769295.735 298.70
   LOCATION L0000348      VOLUME    450674.432 3769295.988 298.70
   LOCATION L0000349      VOLUME    450683.019 3769296.241 298.70
   LOCATION L0000350      VOLUME    450691.605 3769296.494 298.70
   LOCATION L0000351      VOLUME    450700.191 3769296.746 298.70
   LOCATION L0000352      VOLUME    450708.777 3769296.999 298.67
   LOCATION L0000353      VOLUME    450717.364 3769297.252 298.65
   LOCATION L0000354      VOLUME    450725.950 3769297.505 298.62
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   LOCATION L0000355       VOLUME      450734.536 3769297.758 298.62
   LOCATION L0000356       VOLUME      450743.122 3769298.011 298.62
   LOCATION L0000357       VOLUME      450751.709 3769298.264 298.62
   LOCATION L0000358       VOLUME      450760.295 3769298.517 298.62
   LOCATION L0000359       VOLUME      450768.881 3769298.770 298.60
   LOCATION L0000360       VOLUME      450777.468 3769299.023 298.59
   LOCATION L0000361       VOLUME      450786.054 3769299.276 298.57
   LOCATION L0000362       VOLUME      450794.640 3769299.529 298.57
   LOCATION L0000363       VOLUME      450803.226 3769299.782 298.57
   LOCATION L0000364       VOLUME      450811.813 3769300.035 298.58
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Onsite
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001482
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 8
** 450532.053, 3769244.030, 298.41, 3.49, 4.00
** 450532.053, 3769261.560, 298.60, 3.49, 4.00
** 450581.355, 3769261.925, 298.54, 3.49, 4.00
** 450593.772, 3769274.707, 298.44, 3.49, 4.00
** 450781.484, 3769278.359, 298.14, 3.49, 4.00
** 450819.830, 3769274.342, 298.10, 3.49, 4.00
** 450875.340, 3769273.976, 298.68, 3.49, 4.00
** 450876.071, 3769245.856, 298.09, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0000365       VOLUME      450532.053 3769248.325 298.42
   LOCATION L0000366       VOLUME      450532.053 3769256.915 298.51
   LOCATION L0000367       VOLUME      450535.998 3769261.589 298.55
   LOCATION L0000368       VOLUME      450544.588 3769261.652 298.55
   LOCATION L0000369       VOLUME      450553.178 3769261.716 298.55
   LOCATION L0000370       VOLUME      450561.767 3769261.780 298.55
   LOCATION L0000371       VOLUME      450570.357 3769261.843 298.55
   LOCATION L0000372       VOLUME      450578.947 3769261.907 298.55
   LOCATION L0000373       VOLUME      450585.662 3769266.359 298.50
   LOCATION L0000374       VOLUME      450591.648 3769272.520 298.44
   LOCATION L0000375       VOLUME      450599.313 3769274.815 298.41
   LOCATION L0000376       VOLUME      450607.901 3769274.982 298.41
   LOCATION L0000377       VOLUME      450616.489 3769275.149 298.48
   LOCATION L0000378       VOLUME      450625.078 3769275.316 298.56
   LOCATION L0000379       VOLUME      450633.666 3769275.483 298.65
   LOCATION L0000380       VOLUME      450642.254 3769275.650 298.70
   LOCATION L0000381       VOLUME      450650.843 3769275.817 298.70
   LOCATION L0000382       VOLUME      450659.431 3769275.984 298.70
   LOCATION L0000383       VOLUME      450668.020 3769276.151 298.70
   LOCATION L0000384       VOLUME      450676.608 3769276.318 298.70
   LOCATION L0000385       VOLUME      450685.196 3769276.485 298.70
   LOCATION L0000386       VOLUME      450693.785 3769276.652 298.70
   LOCATION L0000387       VOLUME      450702.373 3769276.820 298.68
   LOCATION L0000388       VOLUME      450710.961 3769276.987 298.59
   LOCATION L0000389       VOLUME      450719.550 3769277.154 298.51
   LOCATION L0000390       VOLUME      450728.138 3769277.321 298.42
   LOCATION L0000391       VOLUME      450736.727 3769277.488 298.41
   LOCATION L0000392       VOLUME      450745.315 3769277.655 298.41
   LOCATION L0000393       VOLUME      450753.903 3769277.822 298.41
   LOCATION L0000394       VOLUME      450762.492 3769277.989 298.39
   LOCATION L0000395       VOLUME      450771.080 3769278.156 298.31
   LOCATION L0000396       VOLUME      450779.668 3769278.323 298.23
   LOCATION L0000397       VOLUME      450788.221 3769277.653 298.13
   LOCATION L0000398       VOLUME      450796.764 3769276.758 298.10
   LOCATION L0000399       VOLUME      450805.308 3769275.863 298.10
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   LOCATION L0000400      VOLUME     450813.851 3769274.968 298.11
   LOCATION L0000401      VOLUME     450822.408 3769274.325 298.14
   LOCATION L0000402      VOLUME     450830.998 3769274.268 298.22
   LOCATION L0000403      VOLUME     450839.588 3769274.212 298.29
   LOCATION L0000404      VOLUME     450848.178 3769274.155 298.37
   LOCATION L0000405      VOLUME     450856.767 3769274.099 298.44
   LOCATION L0000406      VOLUME     450865.357 3769274.042 298.52
   LOCATION L0000407      VOLUME     450873.947 3769273.985 298.60
   LOCATION L0000408      VOLUME     450875.527 3769266.782 298.48
   LOCATION L0000409      VOLUME     450875.750 3769258.195 298.32
   LOCATION L0000410      VOLUME     450875.973 3769249.608 298.16
** End of LINE VOLUME Source ID = SLINE2
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Offsite
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.00002434
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 14
** 450531.488, 3769231.780, 298.42, 3.49, 6.51
** 451458.160, 3769224.475, 296.68, 3.49, 6.51
** 451477.884, 3769223.014, 297.16, 3.49, 6.51
** 451508.566, 3769211.326, 297.73, 3.49, 6.51
** 451579.062, 3769183.931, 297.18, 3.49, 6.51
** 451600.612, 3769178.452, 297.61, 3.49, 6.51
** 451630.198, 3769176.626, 297.58, 3.49, 6.51
** 451633.851, 3769205.116, 298.46, 3.49, 6.51
** 451632.755, 3769377.520, 307.01, 3.49, 6.51
** 451633.851, 3769443.268, 304.95, 3.49, 6.51
** 451634.581, 3769487.099, 305.91, 3.49, 6.51
** 451637.869, 3769611.288, 307.59, 3.49, 6.51
** 451637.869, 3769784.058, 305.17, 3.49, 6.51
** 451642.335, 3769918.705, 307.93, 3.49, 6.51
** ----------------------------------------------------------------------
   LOCATION L0000411      VOLUME     450538.488 3769231.725 298.40
   LOCATION L0000412      VOLUME     450552.488 3769231.615 298.43
   LOCATION L0000413      VOLUME     450566.487 3769231.505 298.57
   LOCATION L0000414      VOLUME     450580.487 3769231.394 298.70
   LOCATION L0000415      VOLUME     450594.486 3769231.284 298.70
   LOCATION L0000416      VOLUME     450608.486 3769231.173 298.70
   LOCATION L0000417      VOLUME     450622.485 3769231.063 298.70
   LOCATION L0000418      VOLUME     450636.485 3769230.953 298.70
   LOCATION L0000419      VOLUME     450650.485 3769230.842 298.70
   LOCATION L0000420      VOLUME     450664.484 3769230.732 298.70
   LOCATION L0000421      VOLUME     450678.484 3769230.622 298.61
   LOCATION L0000422      VOLUME     450692.483 3769230.511 298.47
   LOCATION L0000423      VOLUME     450706.483 3769230.401 298.40
   LOCATION L0000424      VOLUME     450720.482 3769230.291 298.40
   LOCATION L0000425      VOLUME     450734.482 3769230.180 298.40
   LOCATION L0000426      VOLUME     450748.481 3769230.070 298.40
   LOCATION L0000427      VOLUME     450762.481 3769229.959 298.40
   LOCATION L0000428      VOLUME     450776.481 3769229.849 298.40
   LOCATION L0000429      VOLUME     450790.480 3769229.739 298.40
   LOCATION L0000430      VOLUME     450804.480 3769229.628 298.40
   LOCATION L0000431      VOLUME     450818.479 3769229.518 298.40
   LOCATION L0000432      VOLUME     450832.479 3769229.408 298.34
   LOCATION L0000433      VOLUME     450846.478 3769229.297 298.28
   LOCATION L0000434      VOLUME     450860.478 3769229.187 298.08
   LOCATION L0000435      VOLUME     450874.478 3769229.077 297.83
   LOCATION L0000436      VOLUME     450888.477 3769228.966 297.74
   LOCATION L0000437      VOLUME     450902.477 3769228.856 297.74
   LOCATION L0000438      VOLUME     450916.476 3769228.745 297.70
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LOCATION L0000439      VOLUME      450930.476 3769228.635 297.61
LOCATION L0000440      VOLUME      450944.475 3769228.525 297.50
LOCATION L0000441      VOLUME      450958.475 3769228.414 297.36
LOCATION L0000442      VOLUME      450972.475 3769228.304 297.23
LOCATION L0000443      VOLUME      450986.474 3769228.194 297.17
LOCATION L0000444      VOLUME      451000.474 3769228.083 297.11
LOCATION L0000445      VOLUME      451014.473 3769227.973 297.05
LOCATION L0000446      VOLUME      451028.473 3769227.863 297.00
LOCATION L0000447      VOLUME      451042.472 3769227.752 296.91
LOCATION L0000448      VOLUME      451056.472 3769227.642 296.82
LOCATION L0000449      VOLUME      451070.471 3769227.531 296.76
LOCATION L0000450      VOLUME      451084.471 3769227.421 296.70
LOCATION L0000451      VOLUME      451098.471 3769227.311 296.68
LOCATION L0000452      VOLUME      451112.470 3769227.200 296.68
LOCATION L0000453      VOLUME      451126.470 3769227.090 296.63
LOCATION L0000454      VOLUME      451140.469 3769226.980 296.54
LOCATION L0000455      VOLUME      451154.469 3769226.869 296.46
LOCATION L0000456      VOLUME      451168.468 3769226.759 296.41
LOCATION L0000457      VOLUME      451182.468 3769226.649 296.37
LOCATION L0000458      VOLUME      451196.468 3769226.538 296.37
LOCATION L0000459      VOLUME      451210.467 3769226.428 296.36
LOCATION L0000460      VOLUME      451224.467 3769226.317 296.32
LOCATION L0000461      VOLUME      451238.466 3769226.207 296.27
LOCATION L0000462      VOLUME      451252.466 3769226.097 296.18
LOCATION L0000463      VOLUME      451266.465 3769225.986 296.08
LOCATION L0000464      VOLUME      451280.465 3769225.876 295.95
LOCATION L0000465      VOLUME      451294.465 3769225.766 295.80
LOCATION L0000466      VOLUME      451308.464 3769225.655 295.66
LOCATION L0000467      VOLUME      451322.464 3769225.545 295.52
LOCATION L0000468      VOLUME      451336.463 3769225.435 295.51
LOCATION L0000469      VOLUME      451350.463 3769225.324 295.66
LOCATION L0000470      VOLUME      451364.462 3769225.214 295.85
LOCATION L0000471      VOLUME      451378.462 3769225.103 296.13
LOCATION L0000472      VOLUME      451392.461 3769224.993 296.37
LOCATION L0000473      VOLUME      451406.461 3769224.883 296.48
LOCATION L0000474      VOLUME      451420.461 3769224.772 296.58
LOCATION L0000475      VOLUME      451434.460 3769224.662 296.65
LOCATION L0000476      VOLUME      451448.460 3769224.552 296.73
LOCATION L0000477      VOLUME      451462.448 3769224.158 296.96
LOCATION L0000478      VOLUME      451476.409 3769223.123 297.19
LOCATION L0000479      VOLUME      451489.585 3769218.556 297.41
LOCATION L0000480      VOLUME      451502.668 3769213.573 297.56
LOCATION L0000481      VOLUME      451515.732 3769208.541 297.47
LOCATION L0000482      VOLUME      451528.782 3769203.470 297.27
LOCATION L0000483      VOLUME      451541.831 3769198.399 297.11
LOCATION L0000484      VOLUME      451554.880 3769193.328 297.17
LOCATION L0000485      VOLUME      451567.930 3769188.257 297.23
LOCATION L0000486      VOLUME      451581.055 3769183.424 297.30
LOCATION L0000487      VOLUME      451594.624 3769179.975 297.39
LOCATION L0000488      VOLUME      451608.418 3769177.970 297.39
LOCATION L0000489      VOLUME      451622.392 3769177.108 297.39
LOCATION L0000490      VOLUME      451630.984 3769182.754 297.63
LOCATION L0000491      VOLUME      451632.764 3769196.640 298.07
LOCATION L0000492      VOLUME      451633.816 3769210.571 298.48
LOCATION L0000493      VOLUME      451633.727 3769224.571 298.95
LOCATION L0000494      VOLUME      451633.638 3769238.570 299.44
LOCATION L0000495      VOLUME      451633.549 3769252.570 299.94
LOCATION L0000496      VOLUME      451633.460 3769266.570 300.44
LOCATION L0000497      VOLUME      451633.371 3769280.570 301.02
LOCATION L0000498      VOLUME      451633.282 3769294.569 301.79
LOCATION L0000499      VOLUME      451633.193 3769308.569 302.60
LOCATION L0000500      VOLUME      451633.104 3769322.569 303.59
LOCATION L0000501      VOLUME      451633.015 3769336.568 304.59
LOCATION L0000502      VOLUME      451632.926 3769350.568 305.92
LOCATION L0000503      VOLUME      451632.837 3769364.568 307.24
LOCATION L0000504      VOLUME      451632.773 3769378.567 307.33
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LOCATION L0000505      VOLUME    451633.006 3769392.566 307.21
LOCATION L0000506      VOLUME    451633.239 3769406.564 306.54
LOCATION L0000507      VOLUME    451633.472 3769420.562 305.68
LOCATION L0000508      VOLUME    451633.706 3769434.560 305.17
LOCATION L0000509      VOLUME    451633.939 3769448.558 304.90
LOCATION L0000510      VOLUME    451634.172 3769462.556 304.97
LOCATION L0000511      VOLUME    451634.406 3769476.554 305.44
LOCATION L0000512      VOLUME    451634.673 3769490.551 305.91
LOCATION L0000513      VOLUME    451635.043 3769504.546 306.38
LOCATION L0000514      VOLUME    451635.414 3769518.541 306.72
LOCATION L0000515      VOLUME    451635.784 3769532.536 306.47
LOCATION L0000516      VOLUME    451636.155 3769546.532 306.23
LOCATION L0000517      VOLUME    451636.525 3769560.527 306.34
LOCATION L0000518      VOLUME    451636.896 3769574.522 306.46
LOCATION L0000519      VOLUME    451637.266 3769588.517 306.97
LOCATION L0000520      VOLUME    451637.636 3769602.512 307.53
LOCATION L0000521      VOLUME    451637.869 3769616.509 307.71
LOCATION L0000522      VOLUME    451637.869 3769630.509 307.75
LOCATION L0000523      VOLUME    451637.869 3769644.509 307.23
LOCATION L0000524      VOLUME    451637.869 3769658.509 306.32
LOCATION L0000525      VOLUME    451637.869 3769672.509 305.61
LOCATION L0000526      VOLUME    451637.869 3769686.509 305.13
LOCATION L0000527      VOLUME    451637.869 3769700.509 304.74
LOCATION L0000528      VOLUME    451637.869 3769714.509 304.53
LOCATION L0000529      VOLUME    451637.869 3769728.509 304.39
LOCATION L0000530      VOLUME    451637.869 3769742.509 304.60
LOCATION L0000531      VOLUME    451637.869 3769756.509 304.80
LOCATION L0000532      VOLUME    451637.869 3769770.509 305.06
LOCATION L0000533      VOLUME    451637.884 3769784.509 305.33
LOCATION L0000534      VOLUME    451638.348 3769798.501 306.17
LOCATION L0000535      VOLUME    451638.812 3769812.493 307.08
LOCATION L0000536      VOLUME    451639.276 3769826.486 307.41
LOCATION L0000537      VOLUME    451639.740 3769840.478 307.50
LOCATION L0000538      VOLUME    451640.205 3769854.470 307.84
LOCATION L0000539      VOLUME    451640.669 3769868.462 308.36
LOCATION L0000540      VOLUME    451641.133 3769882.455 308.51
LOCATION L0000541      VOLUME    451641.597 3769896.447 308.19
LOCATION L0000542      VOLUME    451642.061 3769910.439 307.84
** End of LINE VOLUME Source ID = SLINE3
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000338     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000339     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000340     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000341     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000342     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000343     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000344     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000345     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000346     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000347     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000348     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000349     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000350     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000351     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000352     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000353     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000354     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000355     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000356     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000357     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000358     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000359     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000360     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000361     0.000001673      3.49       4.00       3.25
   SRCPARAM L0000362     0.000001673      3.49       4.00       3.25
```

```
   SRCPARAM L0000363    0.000001673    3.49    4.00    3.25
   SRCPARAM L0000364    0.000001673    3.49    4.00    3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0000365    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000366    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000367    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000368    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000369    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000370    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000371    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000372    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000373    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000374    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000375    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000376    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000377    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000378    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000379    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000380    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000381    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000382    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000383    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000384    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000385    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000386    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000387    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000388    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000389    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000390    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000391    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000392    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000393    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000394    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000395    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000396    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000397    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000398    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000399    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000400    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000401    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000402    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000403    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000404    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000405    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000406    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000407    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000408    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000409    0.0000003222    3.49    4.00    3.25
   SRCPARAM L0000410    0.0000003222    3.49    4.00    3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0000411    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000412    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000413    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000414    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000415    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000416    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000417    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000418    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000419    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000420    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000421    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000422    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000423    0.0000001844    3.49    6.51    3.25
   SRCPARAM L0000424    0.0000001844    3.49    6.51    3.25
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```
SRCPARAM L0000425    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000426    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000427    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000428    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000429    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000430    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000431    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000432    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000433    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000434    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000435    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000436    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000437    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000438    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000439    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000440    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000441    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000442    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000443    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000444    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000445    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000446    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000447    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000448    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000449    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000450    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000451    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000452    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000453    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000454    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000455    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000456    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000457    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000458    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000459    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000460    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000461    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000462    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000463    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000464    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000465    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000466    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000467    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000468    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000469    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000470    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000471    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000472    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000473    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000474    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000475    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000476    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000477    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000478    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000479    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000480    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000481    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000482    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000483    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000484    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000485    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000486    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000487    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000488    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000489    0.0000001844    3.49    6.51    3.25
SRCPARAM L0000490    0.0000001844    3.49    6.51    3.25
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    SRCPARAM L0000491      0.0000001844      3.49      6.51      3.25
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    SRCPARAM L0000493      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000494      0.0000001844      3.49      6.51      3.25
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    SRCPARAM L0000500      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000501      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000502      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000503      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000504      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000505      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000506      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000507      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000508      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000509      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000510      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000511      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000512      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000513      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000514      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000515      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000516      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000517      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000518      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000519      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000520      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000521      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000522      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000523      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000524      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000525      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000526      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000527      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000528      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000529      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000530      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000531      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000532      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000533      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000534      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000535      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000536      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000537      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000538      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000539      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000540      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000541      0.0000001844      3.49      6.51      3.25
    SRCPARAM L0000542      0.0000001844      3.49      6.51      3.25
** ----------------------------------------------------------------
    URBANSRC ALL
    SRCGROUP ALL
SO FINISHED
**
*****************************************
** AERMOD Receptor Pathway
*****************************************
**
**
RE STARTING
    INCLUDED "14539 Ops.rou"
RE FINISHED
**
```

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*****************************************
** AERMOD Meteorology Pathway
*****************************************
**
**
ME STARTING
   SURFFILE KONT_V9_ADJU\KONT_v9.SFC
   PROFFILE KONT_V9_ADJU\KONT_v9.PFL
   SURFDATA 3102 2012
   UAIRDATA 3190 2012
   PROFBASE 289.0 METERS
ME FINISHED
**
*****************************************
** AERMOD Output Pathway
*****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "14539 Ops.AD\AN00GALL.PLT" 31
   SUMMFILE "14539 Ops.sum"
OU FINISHED
**
*****************************************
** Project Parameters
*****************************************
** PROJCTN   CoordinateSystemUTM
** DESCPTN   UTM: Universal Transverse Mercator
** DATUM     North American Datum 1983
** DTMRGN    CONUS
** UNITS     m
** ZONE      11
** ZONEINX   0
**
```

```
** Lakes Environmental AERMOD MPI
**
*****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 8/23/2022
** File: C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE Distribution\14539 Ops\14539 Ops.ADI
**
*****************************************
**
**
*****************************************
** AERMOD Control Pathway
*****************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE Distribution\14539 Ops
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2035210 San_Bernadino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "14539 Ops.err"
CO FINISHED
**
*****************************************
** AERMOD Source Pathway
*****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Idling
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00004517
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 450584.276, 3769293.332, 298.63, 3.49, 4.00
** 450819.830, 3769300.271, 298.67, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0000338      VOLUME     450588.570 3769293.458 298.57
   LOCATION L0000339      VOLUME     450597.156 3769293.711 298.58
   LOCATION L0000340      VOLUME     450605.742 3769293.964 298.58
   LOCATION L0000341      VOLUME     450614.328 3769294.217 298.60
   LOCATION L0000342      VOLUME     450622.915 3769294.470 298.64
   LOCATION L0000343      VOLUME     450631.501 3769294.723 298.67
   LOCATION L0000344      VOLUME     450640.087 3769294.976 298.70
   LOCATION L0000345      VOLUME     450648.673 3769295.229 298.70
   LOCATION L0000346      VOLUME     450657.260 3769295.482 298.70
   LOCATION L0000347      VOLUME     450665.846 3769295.735 298.70
   LOCATION L0000348      VOLUME     450674.432 3769295.988 298.70
   LOCATION L0000349      VOLUME     450683.019 3769296.241 298.70
   LOCATION L0000350      VOLUME     450691.605 3769296.494 298.70
   LOCATION L0000351      VOLUME     450700.191 3769296.746 298.70
   LOCATION L0000352      VOLUME     450708.777 3769296.999 298.67
   LOCATION L0000353      VOLUME     450717.364 3769297.252 298.65
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     LOCATION L0000354      VOLUME       450725.950 3769297.505 298.62
     LOCATION L0000355      VOLUME       450734.536 3769297.758 298.62
     LOCATION L0000356      VOLUME       450743.122 3769298.011 298.62
     LOCATION L0000357      VOLUME       450751.709 3769298.264 298.62
     LOCATION L0000358      VOLUME       450760.295 3769298.517 298.62
     LOCATION L0000359      VOLUME       450768.881 3769298.770 298.60
     LOCATION L0000360      VOLUME       450777.468 3769299.023 298.59
     LOCATION L0000361      VOLUME       450786.054 3769299.276 298.57
     LOCATION L0000362      VOLUME       450794.640 3769299.529 298.57
     LOCATION L0000363      VOLUME       450803.226 3769299.782 298.57
     LOCATION L0000364      VOLUME       450811.813 3769300.035 298.58
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Onsite
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001482
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 8
** 450532.053, 3769244.030, 298.41, 3.49, 4.00
** 450532.053, 3769261.560, 298.60, 3.49, 4.00
** 450581.355, 3769261.925, 298.54, 3.49, 4.00
** 450593.772, 3769274.707, 298.44, 3.49, 4.00
** 450781.484, 3769278.359, 298.14, 3.49, 4.00
** 450819.830, 3769274.342, 298.10, 3.49, 4.00
** 450875.340, 3769273.976, 298.68, 3.49, 4.00
** 450876.071, 3769245.856, 298.09, 3.49, 4.00
** ----------------------------------------------------------------------
     LOCATION L0000365      VOLUME       450532.053 3769248.325 298.42
     LOCATION L0000366      VOLUME       450532.053 3769256.915 298.51
     LOCATION L0000367      VOLUME       450535.998 3769261.589 298.55
     LOCATION L0000368      VOLUME       450544.588 3769261.652 298.55
     LOCATION L0000369      VOLUME       450553.178 3769261.716 298.55
     LOCATION L0000370      VOLUME       450561.767 3769261.780 298.55
     LOCATION L0000371      VOLUME       450570.357 3769261.843 298.55
     LOCATION L0000372      VOLUME       450578.947 3769261.907 298.55
     LOCATION L0000373      VOLUME       450585.662 3769266.359 298.50
     LOCATION L0000374      VOLUME       450591.648 3769272.520 298.44
     LOCATION L0000375      VOLUME       450599.313 3769274.815 298.41
     LOCATION L0000376      VOLUME       450607.901 3769274.982 298.41
     LOCATION L0000377      VOLUME       450616.489 3769275.149 298.48
     LOCATION L0000378      VOLUME       450625.078 3769275.316 298.56
     LOCATION L0000379      VOLUME       450633.666 3769275.483 298.65
     LOCATION L0000380      VOLUME       450642.254 3769275.650 298.70
     LOCATION L0000381      VOLUME       450650.843 3769275.817 298.70
     LOCATION L0000382      VOLUME       450659.431 3769275.984 298.70
     LOCATION L0000383      VOLUME       450668.020 3769276.151 298.70
     LOCATION L0000384      VOLUME       450676.608 3769276.318 298.70
     LOCATION L0000385      VOLUME       450685.196 3769276.485 298.70
     LOCATION L0000386      VOLUME       450693.785 3769276.652 298.70
     LOCATION L0000387      VOLUME       450702.373 3769276.820 298.68
     LOCATION L0000388      VOLUME       450710.961 3769276.987 298.59
     LOCATION L0000389      VOLUME       450719.550 3769277.154 298.51
     LOCATION L0000390      VOLUME       450728.138 3769277.321 298.42
     LOCATION L0000391      VOLUME       450736.727 3769277.488 298.41
     LOCATION L0000392      VOLUME       450745.315 3769277.655 298.41
     LOCATION L0000393      VOLUME       450753.903 3769277.822 298.41
     LOCATION L0000394      VOLUME       450762.492 3769277.989 298.39
     LOCATION L0000395      VOLUME       450771.080 3769278.156 298.31
     LOCATION L0000396      VOLUME       450779.668 3769278.323 298.23
     LOCATION L0000397      VOLUME       450788.221 3769277.653 298.13
     LOCATION L0000398      VOLUME       450796.764 3769276.758 298.10
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   LOCATION L0000399      VOLUME      450805.308 3769275.863 298.10
   LOCATION L0000400      VOLUME      450813.851 3769274.968 298.11
   LOCATION L0000401      VOLUME      450822.408 3769274.325 298.14
   LOCATION L0000402      VOLUME      450830.998 3769274.268 298.22
   LOCATION L0000403      VOLUME      450839.588 3769274.212 298.29
   LOCATION L0000404      VOLUME      450848.178 3769274.155 298.37
   LOCATION L0000405      VOLUME      450856.767 3769274.099 298.44
   LOCATION L0000406      VOLUME      450865.357 3769274.042 298.52
   LOCATION L0000407      VOLUME      450873.947 3769273.985 298.60
   LOCATION L0000408      VOLUME      450875.527 3769266.782 298.48
   LOCATION L0000409      VOLUME      450875.750 3769258.195 298.32
   LOCATION L0000410      VOLUME      450875.973 3769249.608 298.16
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Offsite
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.00002434
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 14
** 450531.488, 3769231.780, 298.42, 3.49, 6.51
** 451458.160, 3769224.475, 296.68, 3.49, 6.51
** 451477.884, 3769223.014, 297.16, 3.49, 6.51
** 451508.566, 3769211.326, 297.73, 3.49, 6.51
** 451579.062, 3769183.931, 297.18, 3.49, 6.51
** 451600.612, 3769178.452, 297.61, 3.49, 6.51
** 451630.198, 3769176.626, 297.58, 3.49, 6.51
** 451633.851, 3769205.116, 298.46, 3.49, 6.51
** 451632.755, 3769377.520, 307.01, 3.49, 6.51
** 451633.851, 3769443.268, 304.95, 3.49, 6.51
** 451634.581, 3769487.099, 305.91, 3.49, 6.51
** 451637.869, 3769611.288, 307.59, 3.49, 6.51
** 451637.869, 3769784.058, 305.17, 3.49, 6.51
** 451642.335, 3769918.705, 307.93, 3.49, 6.51
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   LOCATION L0000412      VOLUME      450552.488 3769231.615 298.43
   LOCATION L0000413      VOLUME      450566.487 3769231.505 298.57
   LOCATION L0000414      VOLUME      450580.487 3769231.394 298.70
   LOCATION L0000415      VOLUME      450594.486 3769231.284 298.70
   LOCATION L0000416      VOLUME      450608.486 3769231.173 298.70
   LOCATION L0000417      VOLUME      450622.485 3769231.063 298.70
   LOCATION L0000418      VOLUME      450636.485 3769230.953 298.70
   LOCATION L0000419      VOLUME      450650.485 3769230.842 298.70
   LOCATION L0000420      VOLUME      450664.484 3769230.732 298.70
   LOCATION L0000421      VOLUME      450678.484 3769230.622 298.61
   LOCATION L0000422      VOLUME      450692.483 3769230.511 298.47
   LOCATION L0000423      VOLUME      450706.483 3769230.401 298.40
   LOCATION L0000424      VOLUME      450720.482 3769230.291 298.40
   LOCATION L0000425      VOLUME      450734.482 3769230.180 298.40
   LOCATION L0000426      VOLUME      450748.481 3769230.070 298.40
   LOCATION L0000427      VOLUME      450762.481 3769229.959 298.40
   LOCATION L0000428      VOLUME      450776.481 3769229.849 298.40
   LOCATION L0000429      VOLUME      450790.480 3769229.739 298.40
   LOCATION L0000430      VOLUME      450804.480 3769229.628 298.40
   LOCATION L0000431      VOLUME      450818.479 3769229.518 298.40
   LOCATION L0000432      VOLUME      450832.479 3769229.408 298.34
   LOCATION L0000433      VOLUME      450846.478 3769229.297 298.28
   LOCATION L0000434      VOLUME      450860.478 3769229.187 298.08
   LOCATION L0000435      VOLUME      450874.478 3769229.077 297.83
   LOCATION L0000436      VOLUME      450888.477 3769228.966 297.74
   LOCATION L0000437      VOLUME      450902.477 3769228.856 297.74
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LOCATION  L0000438      VOLUME      450916.476 3769228.745 297.70
LOCATION  L0000439      VOLUME      450930.476 3769228.635 297.61
LOCATION  L0000440      VOLUME      450944.475 3769228.525 297.50
LOCATION  L0000441      VOLUME      450958.475 3769228.414 297.36
LOCATION  L0000442      VOLUME      450972.475 3769228.304 297.23
LOCATION  L0000443      VOLUME      450986.474 3769228.194 297.17
LOCATION  L0000444      VOLUME      451000.474 3769228.083 297.11
LOCATION  L0000445      VOLUME      451014.473 3769227.973 297.05
LOCATION  L0000446      VOLUME      451028.473 3769227.863 297.00
LOCATION  L0000447      VOLUME      451042.472 3769227.752 296.91
LOCATION  L0000448      VOLUME      451056.472 3769227.642 296.82
LOCATION  L0000449      VOLUME      451070.471 3769227.531 296.76
LOCATION  L0000450      VOLUME      451084.471 3769227.421 296.70
LOCATION  L0000451      VOLUME      451098.471 3769227.311 296.68
LOCATION  L0000452      VOLUME      451112.470 3769227.200 296.68
LOCATION  L0000453      VOLUME      451126.470 3769227.090 296.63
LOCATION  L0000454      VOLUME      451140.469 3769226.980 296.54
LOCATION  L0000455      VOLUME      451154.469 3769226.869 296.46
LOCATION  L0000456      VOLUME      451168.468 3769226.759 296.41
LOCATION  L0000457      VOLUME      451182.468 3769226.649 296.37
LOCATION  L0000458      VOLUME      451196.468 3769226.538 296.37
LOCATION  L0000459      VOLUME      451210.467 3769226.428 296.36
LOCATION  L0000460      VOLUME      451224.467 3769226.317 296.32
LOCATION  L0000461      VOLUME      451238.466 3769226.207 296.27
LOCATION  L0000462      VOLUME      451252.466 3769226.097 296.18
LOCATION  L0000463      VOLUME      451266.465 3769225.986 296.08
LOCATION  L0000464      VOLUME      451280.465 3769225.876 295.95
LOCATION  L0000465      VOLUME      451294.465 3769225.766 295.80
LOCATION  L0000466      VOLUME      451308.464 3769225.655 295.66
LOCATION  L0000467      VOLUME      451322.464 3769225.545 295.52
LOCATION  L0000468      VOLUME      451336.463 3769225.435 295.51
LOCATION  L0000469      VOLUME      451350.463 3769225.324 295.66
LOCATION  L0000470      VOLUME      451364.462 3769225.214 295.85
LOCATION  L0000471      VOLUME      451378.462 3769225.103 296.13
LOCATION  L0000472      VOLUME      451392.461 3769224.993 296.37
LOCATION  L0000473      VOLUME      451406.461 3769224.883 296.48
LOCATION  L0000474      VOLUME      451420.461 3769224.772 296.58
LOCATION  L0000475      VOLUME      451434.460 3769224.662 296.65
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LOCATION  L0000477      VOLUME      451462.448 3769224.158 296.96
LOCATION  L0000478      VOLUME      451476.409 3769223.123 297.19
LOCATION  L0000479      VOLUME      451489.585 3769218.556 297.41
LOCATION  L0000480      VOLUME      451502.668 3769213.573 297.56
LOCATION  L0000481      VOLUME      451515.732 3769208.541 297.47
LOCATION  L0000482      VOLUME      451528.782 3769203.470 297.27
LOCATION  L0000483      VOLUME      451541.831 3769198.399 297.11
LOCATION  L0000484      VOLUME      451554.880 3769193.328 297.17
LOCATION  L0000485      VOLUME      451567.930 3769188.257 297.23
LOCATION  L0000486      VOLUME      451581.055 3769183.424 297.30
LOCATION  L0000487      VOLUME      451594.624 3769179.975 297.39
LOCATION  L0000488      VOLUME      451608.418 3769177.970 297.39
LOCATION  L0000489      VOLUME      451622.392 3769177.108 297.39
LOCATION  L0000490      VOLUME      451630.984 3769182.754 297.63
LOCATION  L0000491      VOLUME      451632.764 3769196.640 298.07
LOCATION  L0000492      VOLUME      451633.816 3769210.571 298.48
LOCATION  L0000493      VOLUME      451633.727 3769224.571 298.95
LOCATION  L0000494      VOLUME      451633.638 3769238.570 299.44
LOCATION  L0000495      VOLUME      451633.549 3769252.570 299.94
LOCATION  L0000496      VOLUME      451633.460 3769266.570 300.44
LOCATION  L0000497      VOLUME      451633.371 3769280.570 301.02
LOCATION  L0000498      VOLUME      451633.282 3769294.569 301.79
LOCATION  L0000499      VOLUME      451633.193 3769308.569 302.60
LOCATION  L0000500      VOLUME      451633.104 3769322.569 303.59
LOCATION  L0000501      VOLUME      451633.015 3769336.568 304.59
LOCATION  L0000502      VOLUME      451632.926 3769350.568 305.92
LOCATION  L0000503      VOLUME      451632.837 3769364.568 307.24
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      LOCATION L0000504        VOLUME     451632.773 3769378.567 307.33
      LOCATION L0000505        VOLUME     451633.006 3769392.566 307.21
      LOCATION L0000506        VOLUME     451633.239 3769406.564 306.54
      LOCATION L0000507        VOLUME     451633.472 3769420.562 305.68
      LOCATION L0000508        VOLUME     451633.706 3769434.560 305.17
      LOCATION L0000509        VOLUME     451633.939 3769448.558 304.90
      LOCATION L0000510        VOLUME     451634.172 3769462.556 304.97
      LOCATION L0000511        VOLUME     451634.406 3769476.554 305.44
      LOCATION L0000512        VOLUME     451634.673 3769490.551 305.91
      LOCATION L0000513        VOLUME     451635.043 3769504.546 306.38
      LOCATION L0000514        VOLUME     451635.414 3769518.541 306.72
      LOCATION L0000515        VOLUME     451635.784 3769532.536 306.47
      LOCATION L0000516        VOLUME     451636.155 3769546.532 306.23
      LOCATION L0000517        VOLUME     451636.525 3769560.527 306.34
      LOCATION L0000518        VOLUME     451636.896 3769574.522 306.46
      LOCATION L0000519        VOLUME     451637.266 3769588.517 306.97
      LOCATION L0000520        VOLUME     451637.636 3769602.512 307.53
      LOCATION L0000521        VOLUME     451637.869 3769616.509 307.71
      LOCATION L0000522        VOLUME     451637.869 3769630.509 307.75
      LOCATION L0000523        VOLUME     451637.869 3769644.509 307.23
      LOCATION L0000524        VOLUME     451637.869 3769658.509 306.32
      LOCATION L0000525        VOLUME     451637.869 3769672.509 305.61
      LOCATION L0000526        VOLUME     451637.869 3769686.509 305.13
      LOCATION L0000527        VOLUME     451637.869 3769700.509 304.74
      LOCATION L0000528        VOLUME     451637.869 3769714.509 304.53
      LOCATION L0000529        VOLUME     451637.869 3769728.509 304.39
      LOCATION L0000530        VOLUME     451637.869 3769742.509 304.60
      LOCATION L0000531        VOLUME     451637.869 3769756.509 304.80
      LOCATION L0000532        VOLUME     451637.869 3769770.509 305.06
      LOCATION L0000533        VOLUME     451637.884 3769784.509 305.33
      LOCATION L0000534        VOLUME     451638.348 3769798.501 306.17
      LOCATION L0000535        VOLUME     451638.812 3769812.493 307.08
      LOCATION L0000536        VOLUME     451639.276 3769826.486 307.41
      LOCATION L0000537        VOLUME     451639.740 3769840.478 307.50
      LOCATION L0000538        VOLUME     451640.205 3769854.470 307.84
      LOCATION L0000539        VOLUME     451640.669 3769868.462 308.36
      LOCATION L0000540        VOLUME     451641.133 3769882.455 308.51
      LOCATION L0000541        VOLUME     451641.597 3769896.447 308.19
      LOCATION L0000542        VOLUME     451642.061 3769910.439 307.84
   ** End of LINE VOLUME Source ID = SLINE3
   ** Source Parameters **
   ** LINE VOLUME Source ID = SLINE1
      SRCPARAM L0000338        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000339        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000340        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000341        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000342        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000343        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000344        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000345        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000346        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000347        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000348        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000349        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000350        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000351        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000352        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000353        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000354        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000355        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000356        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000357        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000358        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000359        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000360        0.000001673        3.49        4.00        3.25
      SRCPARAM L0000361        0.000001673        3.49        4.00        3.25
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SRCPARAM L0000362     0.000001673      3.49      4.00      3.25
SRCPARAM L0000363     0.000001673      3.49      4.00      3.25
SRCPARAM L0000364     0.000001673      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE2
SRCPARAM L0000365     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000366     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000367     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000368     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000369     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000370     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000371     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000372     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000373     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000374     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000375     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000376     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000377     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000378     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000379     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000380     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000381     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000382     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000383     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000384     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000385     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000386     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000387     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000388     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000389     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000390     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000391     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000392     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000393     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000394     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000395     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000396     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000397     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000398     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000399     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000400     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000401     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000402     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000403     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000404     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000405     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000406     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000407     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000408     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000409     0.0000003222     3.49      4.00      3.25
SRCPARAM L0000410     0.0000003222     3.49      4.00      3.25
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
SRCPARAM L0000411     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000412     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000413     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000414     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000415     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000416     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000417     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000418     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000419     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000420     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000421     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000422     0.0000001844     3.49      6.51      3.25
SRCPARAM L0000423     0.0000001844     3.49      6.51      3.25
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SRCPARAM L0000424     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000425     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000426     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000427     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000428     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000429     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000430     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000431     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000432     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000433     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000434     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000435     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000436     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000437     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000438     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000439     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000440     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000441     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000442     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000443     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000444     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000445     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000446     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000447     0.0000001844     3.49     6.51     3.25
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SRCPARAM L0000455     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000456     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000457     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000458     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000459     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000460     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000461     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000462     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000463     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000464     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000465     0.0000001844     3.49     6.51     3.25
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SRCPARAM L0000469     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000470     0.0000001844     3.49     6.51     3.25
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SRCPARAM L0000475     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000476     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000477     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000478     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000479     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000480     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000481     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000482     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000483     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000484     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000485     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000486     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000487     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000488     0.0000001844     3.49     6.51     3.25
SRCPARAM L0000489     0.0000001844     3.49     6.51     3.25
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   SRCPARAM L0000490     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000491     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000492     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000493     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000494     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000495     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000496     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000497     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000498     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000499     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000500     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000501     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000502     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000503     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000504     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000505     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000506     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000507     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000508     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000509     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000510     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000511     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000512     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000513     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000514     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000515     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000516     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000517     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000518     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000519     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000520     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000521     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000522     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000523     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000524     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000525     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000526     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000527     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000528     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000529     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000530     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000531     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000532     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000533     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000534     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000535     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000536     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000537     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000538     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000539     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000540     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000541     0.0000001844     3.49     6.51     3.25
   SRCPARAM L0000542     0.0000001844     3.49     6.51     3.25
** ------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
*****************************************
** AERMOD Receptor Pathway
*****************************************
**
**
RE STARTING
   INCLUDED "14539 Ops.rou"
RE FINISHED
```

```
**
*****************************************
** AERMOD Meteorology Pathway
*****************************************
**
**
ME STARTING
   SURFFILE KONT_V9_ADJU\KONT_v9.SFC
   PROFFILE KONT_V9_ADJU\KONT_v9.PFL
   SURFDATA 3102 2012
   UAIRDATA 3190 2012
   PROFBASE 289.0 METERS
ME FINISHED
**
*****************************************
** AERMOD Output Pathway
*****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "14539 Ops.AD\AN00GALL.PLT" 31
   SUMMFILE "14539 Ops.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     540       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187     540       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

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

██ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

```
                    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   205 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   2035210.0 ;  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:    205 Source(s);       1 Source Group(s); and      47 Receptor(s)

                  with:       0 POINT(s), including
                              0 POINTCAP(s) and      0 POINTHOR(s)
                   and:    205 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 a total of     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) =   289.00 ;  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 =       3.6 MB of RAM.

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

**Detailed Error/Message File:   14539
Ops.err
**File for Summary of Results:   14539
```

Ops.sum
🔳 *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                        *** VOLUME SOURCE DATA ***

	NUMBER	EMISSION RATE			BASE	RELEASE	INIT.	INIT.
SOURCE	URBAN PART.	EMISSION RATE (GRAMS/SEC)	X	Y	ELEV.	HEIGHT	SY	SZ
SOURCE ID (METERS)	SCALAR CATS.	VARY BY	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	
- -								
L0000338 YES	0	0.16730E-05	450588.6	3769293.5	298.6	3.49	4.00	3.25
L0000339 YES	0	0.16730E-05	450597.2	3769293.7	298.6	3.49	4.00	3.25
L0000340 YES	0	0.16730E-05	450605.7	3769294.0	298.6	3.49	4.00	3.25
L0000341 YES	0	0.16730E-05	450614.3	3769294.2	298.6	3.49	4.00	3.25
L0000342 YES	0	0.16730E-05	450622.9	3769294.5	298.6	3.49	4.00	3.25
L0000343 YES	0	0.16730E-05	450631.5	3769294.7	298.7	3.49	4.00	3.25
L0000344 YES	0	0.16730E-05	450640.1	3769295.0	298.7	3.49	4.00	3.25
L0000345 YES	0	0.16730E-05	450648.7	3769295.2	298.7	3.49	4.00	3.25
L0000346 YES	0	0.16730E-05	450657.3	3769295.5	298.7	3.49	4.00	3.25
L0000347 YES	0	0.16730E-05	450665.8	3769295.7	298.7	3.49	4.00	3.25
L0000348 YES	0	0.16730E-05	450674.4	3769296.0	298.7	3.49	4.00	3.25
L0000349 YES	0	0.16730E-05	450683.0	3769296.2	298.7	3.49	4.00	3.25
L0000350 YES	0	0.16730E-05	450691.6	3769296.5	298.7	3.49	4.00	3.25
L0000351 YES	0	0.16730E-05	450700.2	3769296.7	298.7	3.49	4.00	3.25
L0000352 YES	0	0.16730E-05	450708.8	3769297.0	298.7	3.49	4.00	3.25
L0000353 YES	0	0.16730E-05	450717.4	3769297.3	298.7	3.49	4.00	3.25
L0000354 YES	0	0.16730E-05	450726.0	3769297.5	298.6	3.49	4.00	3.25
L0000355 YES	0	0.16730E-05	450734.5	3769297.8	298.6	3.49	4.00	3.25
L0000356 YES	0	0.16730E-05	450743.1	3769298.0	298.6	3.49	4.00	3.25
L0000357 YES	0	0.16730E-05	450751.7	3769298.3	298.6	3.49	4.00	3.25
L0000358 YES	0	0.16730E-05	450760.3	3769298.5	298.6	3.49	4.00	3.25
L0000359 YES	0	0.16730E-05	450768.9	3769298.8	298.6	3.49	4.00	3.25
L0000360	0	0.16730E-05	450777.5	3769299.0	298.6	3.49	4.00	3.25

YES
```
L0000361          0   0.16730E-05   450786.1 3769299.3    298.6      3.49      4.00      3.25
YES
L0000362          0   0.16730E-05   450794.6 3769299.5    298.6      3.49      4.00      3.25
YES
L0000363          0   0.16730E-05   450803.2 3769299.8    298.6      3.49      4.00      3.25
YES
L0000364          0   0.16730E-05   450811.8 3769300.0    298.6      3.49      4.00      3.25
YES
L0000365          0   0.32220E-06   450532.1 3769248.3    298.4      3.49      4.00      3.25
YES
L0000366          0   0.32220E-06   450532.1 3769256.9    298.5      3.49      4.00      3.25
YES
L0000367          0   0.32220E-06   450536.0 3769261.6    298.6      3.49      4.00      3.25
YES
L0000368          0   0.32220E-06   450544.6 3769261.7    298.6      3.49      4.00      3.25
YES
L0000369          0   0.32220E-06   450553.2 3769261.7    298.6      3.49      4.00      3.25
YES
L0000370          0   0.32220E-06   450561.8 3769261.8    298.6      3.49      4.00      3.25
YES
L0000371          0   0.32220E-06   450570.4 3769261.8    298.6      3.49      4.00      3.25
YES
L0000372          0   0.32220E-06   450578.9 3769261.9    298.6      3.49      4.00      3.25
YES
L0000373          0   0.32220E-06   450585.7 3769266.4    298.5      3.49      4.00      3.25
YES
L0000374          0   0.32220E-06   450591.6 3769272.5    298.4      3.49      4.00      3.25
YES
L0000375          0   0.32220E-06   450599.3 3769274.8    298.4      3.49      4.00      3.25
YES
L0000376          0   0.32220E-06   450607.9 3769275.0    298.4      3.49      4.00      3.25
YES
L0000377          0   0.32220E-06   450616.5 3769275.1    298.5      3.49      4.00      3.25
YES
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FF *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                   *** VOLUME SOURCE DATA ***

SOURCE ID (METERS)	NUMBER URBAN PART. CATS. SCALAR VARY	EMISSION RATE EMISSION RATE (GRAMS/SEC) BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ
L0000378	0	0.32220E-06	450625.1	3769275.3	298.6	3.49	4.00	3.25
YES								
L0000379	0	0.32220E-06	450633.7	3769275.5	298.7	3.49	4.00	3.25
YES								
L0000380	0	0.32220E-06	450642.3	3769275.6	298.7	3.49	4.00	3.25
YES								
L0000381	0	0.32220E-06	450650.8	3769275.8	298.7	3.49	4.00	3.25
YES								
L0000382	0	0.32220E-06	450659.4	3769276.0	298.7	3.49	4.00	3.25
YES								
L0000383	0	0.32220E-06	450668.0	3769276.2	298.7	3.49	4.00	3.25

```
YES
L0000384           0   0.32220E-06   450676.6 3769276.3   298.7   3.49   4.00   3.25
YES
L0000385           0   0.32220E-06   450685.2 3769276.5   298.7   3.49   4.00   3.25
YES
L0000386           0   0.32220E-06   450693.8 3769276.7   298.7   3.49   4.00   3.25
YES
L0000387           0   0.32220E-06   450702.4 3769276.8   298.7   3.49   4.00   3.25
YES
L0000388           0   0.32220E-06   450711.0 3769277.0   298.6   3.49   4.00   3.25
YES
L0000389           0   0.32220E-06   450719.5 3769277.2   298.5   3.49   4.00   3.25
YES
L0000390           0   0.32220E-06   450728.1 3769277.3   298.4   3.49   4.00   3.25
YES
L0000391           0   0.32220E-06   450736.7 3769277.5   298.4   3.49   4.00   3.25
YES
L0000392           0   0.32220E-06   450745.3 3769277.7   298.4   3.49   4.00   3.25
YES
L0000393           0   0.32220E-06   450753.9 3769277.8   298.4   3.49   4.00   3.25
YES
L0000394           0   0.32220E-06   450762.5 3769278.0   298.4   3.49   4.00   3.25
YES
L0000395           0   0.32220E-06   450771.1 3769278.2   298.3   3.49   4.00   3.25
YES
L0000396           0   0.32220E-06   450779.7 3769278.3   298.2   3.49   4.00   3.25
YES
L0000397           0   0.32220E-06   450788.2 3769277.7   298.1   3.49   4.00   3.25
YES
L0000398           0   0.32220E-06   450796.8 3769276.8   298.1   3.49   4.00   3.25
YES
L0000399           0   0.32220E-06   450805.3 3769275.9   298.1   3.49   4.00   3.25
YES
L0000400           0   0.32220E-06   450813.9 3769275.0   298.1   3.49   4.00   3.25
YES
L0000401           0   0.32220E-06   450822.4 3769274.3   298.1   3.49   4.00   3.25
YES
L0000402           0   0.32220E-06   450831.0 3769274.3   298.2   3.49   4.00   3.25
YES
L0000403           0   0.32220E-06   450839.6 3769274.2   298.3   3.49   4.00   3.25
YES
L0000404           0   0.32220E-06   450848.2 3769274.2   298.4   3.49   4.00   3.25
YES
L0000405           0   0.32220E-06   450856.8 3769274.1   298.4   3.49   4.00   3.25
YES
L0000406           0   0.32220E-06   450865.4 3769274.0   298.5   3.49   4.00   3.25
YES
L0000407           0   0.32220E-06   450873.9 3769274.0   298.6   3.49   4.00   3.25
YES
L0000408           0   0.32220E-06   450875.5 3769266.8   298.5   3.49   4.00   3.25
YES
L0000409           0   0.32220E-06   450875.8 3769258.2   298.3   3.49   4.00   3.25
YES
L0000410           0   0.32220E-06   450876.0 3769249.6   298.2   3.49   4.00   3.25
YES
L0000411           0   0.18440E-06   450538.5 3769231.7   298.4   3.49   6.51   3.25
YES
L0000412           0   0.18440E-06   450552.5 3769231.6   298.4   3.49   6.51   3.25
YES
L0000413           0   0.18440E-06   450566.5 3769231.5   298.6   3.49   6.51   3.25
YES
L0000414           0   0.18440E-06   450580.5 3769231.4   298.7   3.49   6.51   3.25
YES
L0000415           0   0.18440E-06   450594.5 3769231.3   298.7   3.49   6.51   3.25
YES
L0000416           0   0.18440E-06   450608.5 3769231.2   298.7   3.49   6.51   3.25
```

YES

L0000417   0   0.18440E-06 450622.5 3769231.1   298.7   3.49   6.51   3.25
YES

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                            *** VOLUME SOURCE DATA ***

	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						

- -
- - - - - - - - - - - - -

L0000418   0   0.18440E-06 450636.5 3769231.0   298.7   3.49   6.51   3.25
YES
L0000419   0   0.18440E-06 450650.5 3769230.8   298.7   3.49   6.51   3.25
YES
L0000420   0   0.18440E-06 450664.5 3769230.7   298.7   3.49   6.51   3.25
YES
L0000421   0   0.18440E-06 450678.5 3769230.6   298.6   3.49   6.51   3.25
YES
L0000422   0   0.18440E-06 450692.5 3769230.5   298.5   3.49   6.51   3.25
YES
L0000423   0   0.18440E-06 450706.5 3769230.4   298.4   3.49   6.51   3.25
YES
L0000424   0   0.18440E-06 450720.5 3769230.3   298.4   3.49   6.51   3.25
YES
L0000425   0   0.18440E-06 450734.5 3769230.2   298.4   3.49   6.51   3.25
YES
L0000426   0   0.18440E-06 450748.5 3769230.1   298.4   3.49   6.51   3.25
YES
L0000427   0   0.18440E-06 450762.5 3769230.0   298.4   3.49   6.51   3.25
YES
L0000428   0   0.18440E-06 450776.5 3769229.8   298.4   3.49   6.51   3.25
YES
L0000429   0   0.18440E-06 450790.5 3769229.7   298.4   3.49   6.51   3.25
YES
L0000430   0   0.18440E-06 450804.5 3769229.6   298.4   3.49   6.51   3.25
YES
L0000431   0   0.18440E-06 450818.5 3769229.5   298.4   3.49   6.51   3.25
YES
L0000432   0   0.18440E-06 450832.5 3769229.4   298.3   3.49   6.51   3.25
YES
L0000433   0   0.18440E-06 450846.5 3769229.3   298.3   3.49   6.51   3.25
YES
L0000434   0   0.18440E-06 450860.5 3769229.2   298.1   3.49   6.51   3.25
YES
L0000435   0   0.18440E-06 450874.5 3769229.1   297.8   3.49   6.51   3.25
YES
L0000436   0   0.18440E-06 450888.5 3769229.0   297.7   3.49   6.51   3.25
YES
L0000437   0   0.18440E-06 450902.5 3769228.9   297.7   3.49   6.51   3.25
YES
L0000438   0   0.18440E-06 450916.5 3769228.7   297.7   3.49   6.51   3.25
YES
L0000439   0   0.18440E-06 450930.5 3769228.6   297.6   3.49   6.51   3.25

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YES
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YES
L0000441          0   0.18440E-06   450958.5 3769228.4    297.4      3.49      6.51      3.25
YES
L0000442          0   0.18440E-06   450972.5 3769228.3    297.2      3.49      6.51      3.25
YES
L0000443          0   0.18440E-06   450986.5 3769228.2    297.2      3.49      6.51      3.25
YES
L0000444          0   0.18440E-06   451000.5 3769228.1    297.1      3.49      6.51      3.25
YES
L0000445          0   0.18440E-06   451014.5 3769228.0    297.1      3.49      6.51      3.25
YES
L0000446          0   0.18440E-06   451028.5 3769227.9    297.0      3.49      6.51      3.25
YES
L0000447          0   0.18440E-06   451042.5 3769227.8    296.9      3.49      6.51      3.25
YES
L0000448          0   0.18440E-06   451056.5 3769227.6    296.8      3.49      6.51      3.25
YES
L0000449          0   0.18440E-06   451070.5 3769227.5    296.8      3.49      6.51      3.25
YES
L0000450          0   0.18440E-06   451084.5 3769227.4    296.7      3.49      6.51      3.25
YES
L0000451          0   0.18440E-06   451098.5 3769227.3    296.7      3.49      6.51      3.25
YES
L0000452          0   0.18440E-06   451112.5 3769227.2    296.7      3.49      6.51      3.25
YES
L0000453          0   0.18440E-06   451126.5 3769227.1    296.6      3.49      6.51      3.25
YES
L0000454          0   0.18440E-06   451140.5 3769227.0    296.5      3.49      6.51      3.25
YES
L0000455          0   0.18440E-06   451154.5 3769226.9    296.5      3.49      6.51      3.25
YES
L0000456          0   0.18440E-06   451168.5 3769226.8    296.4      3.49      6.51      3.25
YES
L0000457          0   0.18440E-06   451182.5 3769226.6    296.4      3.49      6.51      3.25
YES
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FF *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
*** AERMET - VERSION 16216 ***
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                        *** VOLUME SOURCE DATA ***

```
            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
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - -

L0000458          0   0.18440E-06   451196.5 3769226.5    296.4      3.49      6.51      3.25
YES
L0000459          0   0.18440E-06   451210.5 3769226.4    296.4      3.49      6.51      3.25
YES
L0000460          0   0.18440E-06   451224.5 3769226.3    296.3      3.49      6.51      3.25
YES
L0000461          0   0.18440E-06   451238.5 3769226.2    296.3      3.49      6.51      3.25
YES
L0000462          0   0.18440E-06   451252.5 3769226.1    296.2      3.49      6.51      3.25
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YES
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YES
L0000464          0   0.18440E-06   451280.5 3769225.9    295.9    3.49    6.51    3.25
YES
L0000465          0   0.18440E-06   451294.5 3769225.8    295.8    3.49    6.51    3.25
YES
L0000466          0   0.18440E-06   451308.5 3769225.7    295.7    3.49    6.51    3.25
YES
L0000467          0   0.18440E-06   451322.5 3769225.5    295.5    3.49    6.51    3.25
YES
L0000468          0   0.18440E-06   451336.5 3769225.4    295.5    3.49    6.51    3.25
YES
L0000469          0   0.18440E-06   451350.5 3769225.3    295.7    3.49    6.51    3.25
YES
L0000470          0   0.18440E-06   451364.5 3769225.2    295.9    3.49    6.51    3.25
YES
L0000471          0   0.18440E-06   451378.5 3769225.1    296.1    3.49    6.51    3.25
YES
L0000472          0   0.18440E-06   451392.5 3769225.0    296.4    3.49    6.51    3.25
YES
L0000473          0   0.18440E-06   451406.5 3769224.9    296.5    3.49    6.51    3.25
YES
L0000474          0   0.18440E-06   451420.5 3769224.8    296.6    3.49    6.51    3.25
YES
L0000475          0   0.18440E-06   451434.5 3769224.7    296.7    3.49    6.51    3.25
YES
L0000476          0   0.18440E-06   451448.5 3769224.6    296.7    3.49    6.51    3.25
YES
L0000477          0   0.18440E-06   451462.4 3769224.2    297.0    3.49    6.51    3.25
YES
L0000478          0   0.18440E-06   451476.4 3769223.1    297.2    3.49    6.51    3.25
YES
L0000479          0   0.18440E-06   451489.6 3769218.6    297.4    3.49    6.51    3.25
YES
L0000480          0   0.18440E-06   451502.7 3769213.6    297.6    3.49    6.51    3.25
YES
L0000481          0   0.18440E-06   451515.7 3769208.5    297.5    3.49    6.51    3.25
YES
L0000482          0   0.18440E-06   451528.8 3769203.5    297.3    3.49    6.51    3.25
YES
L0000483          0   0.18440E-06   451541.8 3769198.4    297.1    3.49    6.51    3.25
YES
L0000484          0   0.18440E-06   451554.9 3769193.3    297.2    3.49    6.51    3.25
YES
L0000485          0   0.18440E-06   451567.9 3769188.3    297.2    3.49    6.51    3.25
YES
L0000486          0   0.18440E-06   451581.1 3769183.4    297.3    3.49    6.51    3.25
YES
L0000487          0   0.18440E-06   451594.6 3769180.0    297.4    3.49    6.51    3.25
YES
L0000488          0   0.18440E-06   451608.4 3769178.0    297.4    3.49    6.51    3.25
YES
L0000489          0   0.18440E-06   451622.4 3769177.1    297.4    3.49    6.51    3.25
YES
L0000490          0   0.18440E-06   451631.0 3769182.8    297.6    3.49    6.51    3.25
YES
L0000491          0   0.18440E-06   451632.8 3769196.6    298.1    3.49    6.51    3.25
YES
L0000492          0   0.18440E-06   451633.8 3769210.6    298.5    3.49    6.51    3.25
YES
L0000493          0   0.18440E-06   451633.7 3769224.6    298.9    3.49    6.51    3.25
YES
L0000494          0   0.18440E-06   451633.6 3769238.6    299.4    3.49    6.51    3.25
YES
L0000495          0   0.18440E-06   451633.5 3769252.6    299.9    3.49    6.51    3.25
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YES
L0000496         0    0.18440E-06  451633.5 3769266.6   300.4    3.49      6.51     3.25
YES
L0000497         0    0.18440E-06  451633.4 3769280.6   301.0    3.49      6.51     3.25
YES
```
FF *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
*** AERMET - VERSION 16216 ***
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

              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
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - -

L0000498         0    0.18440E-06  451633.3 3769294.6   301.8    3.49      6.51     3.25
YES
L0000499         0    0.18440E-06  451633.2 3769308.6   302.6    3.49      6.51     3.25
YES
L0000500         0    0.18440E-06  451633.1 3769322.6   303.6    3.49      6.51     3.25
YES
L0000501         0    0.18440E-06  451633.0 3769336.6   304.6    3.49      6.51     3.25
YES
L0000502         0    0.18440E-06  451632.9 3769350.6   305.9    3.49      6.51     3.25
YES
L0000503         0    0.18440E-06  451632.8 3769364.6   307.2    3.49      6.51     3.25
YES
L0000504         0    0.18440E-06  451632.8 3769378.6   307.3    3.49      6.51     3.25
YES
L0000505         0    0.18440E-06  451633.0 3769392.6   307.2    3.49      6.51     3.25
YES
L0000506         0    0.18440E-06  451633.2 3769406.6   306.5    3.49      6.51     3.25
YES
L0000507         0    0.18440E-06  451633.5 3769420.6   305.7    3.49      6.51     3.25
YES
L0000508         0    0.18440E-06  451633.7 3769434.6   305.2    3.49      6.51     3.25
YES
L0000509         0    0.18440E-06  451633.9 3769448.6   304.9    3.49      6.51     3.25
YES
L0000510         0    0.18440E-06  451634.2 3769462.6   305.0    3.49      6.51     3.25
YES
L0000511         0    0.18440E-06  451634.4 3769476.6   305.4    3.49      6.51     3.25
YES
L0000512         0    0.18440E-06  451634.7 3769490.6   305.9    3.49      6.51     3.25
YES
L0000513         0    0.18440E-06  451635.0 3769504.5   306.4    3.49      6.51     3.25
YES
L0000514         0    0.18440E-06  451635.4 3769518.5   306.7    3.49      6.51     3.25
YES
L0000515         0    0.18440E-06  451635.8 3769532.5   306.5    3.49      6.51     3.25
YES
L0000516         0    0.18440E-06  451636.2 3769546.5   306.2    3.49      6.51     3.25
YES
L0000517         0    0.18440E-06  451636.5 3769560.5   306.3    3.49      6.51     3.25
YES
L0000518         0    0.18440E-06  451636.9 3769574.5   306.5    3.49      6.51     3.25
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YES
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YES
L0000520           0   0.18440E-06  451637.6 3769602.5    307.5      3.49     6.51     3.25
YES
L0000521           0   0.18440E-06  451637.9 3769616.5    307.7      3.49     6.51     3.25
YES
L0000522           0   0.18440E-06  451637.9 3769630.5    307.8      3.49     6.51     3.25
YES
L0000523           0   0.18440E-06  451637.9 3769644.5    307.2      3.49     6.51     3.25
YES
L0000524           0   0.18440E-06  451637.9 3769658.5    306.3      3.49     6.51     3.25
YES
L0000525           0   0.18440E-06  451637.9 3769672.5    305.6      3.49     6.51     3.25
YES
L0000526           0   0.18440E-06  451637.9 3769686.5    305.1      3.49     6.51     3.25
YES
L0000527           0   0.18440E-06  451637.9 3769700.5    304.7      3.49     6.51     3.25
YES
L0000528           0   0.18440E-06  451637.9 3769714.5    304.5      3.49     6.51     3.25
YES
L0000529           0   0.18440E-06  451637.9 3769728.5    304.4      3.49     6.51     3.25
YES
L0000530           0   0.18440E-06  451637.9 3769742.5    304.6      3.49     6.51     3.25
YES
L0000531           0   0.18440E-06  451637.9 3769756.5    304.8      3.49     6.51     3.25
YES
L0000532           0   0.18440E-06  451637.9 3769770.5    305.1      3.49     6.51     3.25
YES
L0000533           0   0.18440E-06  451637.9 3769784.5    305.3      3.49     6.51     3.25
YES
L0000534           0   0.18440E-06  451638.3 3769798.5    306.2      3.49     6.51     3.25
YES
L0000535           0   0.18440E-06  451638.8 3769812.5    307.1      3.49     6.51     3.25
YES
L0000536           0   0.18440E-06  451639.3 3769826.5    307.4      3.49     6.51     3.25
YES
L0000537           0   0.18440E-06  451639.7 3769840.5    307.5      3.49     6.51     3.25
YES
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▉▉ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
*** AERMET - VERSION 16216 ***
***   ***   11:35:02

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*** MODELOPTs: RegDFAULT CONC ELEV   URBAN   ADJ_U*

                                     *** VOLUME SOURCE DATA ***

```
            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
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - -


L0000538           0   0.18440E-06  451640.2 3769854.5    307.8      3.49     6.51     3.25
YES
L0000539           0   0.18440E-06  451640.7 3769868.5    308.4      3.49     6.51     3.25
YES
L0000540           0   0.18440E-06  451641.1 3769882.5    308.5      3.49     6.51     3.25
YES
L0000541           0   0.18440E-06  451641.6 3769896.4    308.2      3.49     6.51     3.25
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    YES
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FF *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

                       PAGE   8
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                  *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID   SOURCE IDs
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🔳 *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

```
                                    *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                        SOURCE IDs
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🔳 *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

                    PAGE 10
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

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


        2035210.  L0000338    , L0000339    , L0000340    , L0000341    , L0000342    ,
             L0000343    , L0000344    ,
 L0000345    ,

        L0000346    , L0000347    , L0000348    , L0000349    , L0000350    , L0000351    ,
        L0000352    , L0000353    ,

        L0000354    , L0000355    , L0000356    , L0000357    , L0000358    , L0000359    ,
        L0000360    , L0000361    ,
```

```
L0000362    , L0000363    , L0000364    , L0000365    , L0000366    , L0000367    ,
L0000368    , L0000369    ,

L0000370    , L0000371    , L0000372    , L0000373    , L0000374    , L0000375    ,
L0000376    , L0000377    ,

L0000378    , L0000379    , L0000380    , L0000381    , L0000382    , L0000383    ,
L0000384    , L0000385    ,

L0000386    , L0000387    , L0000388    , L0000389    , L0000390    , L0000391    ,
L0000392    , L0000393    ,

L0000394    , L0000395    , L0000396    , L0000397    , L0000398    , L0000399    ,
L0000400    , L0000401    ,

L0000402    , L0000403    , L0000404    , L0000405    , L0000406    , L0000407    ,
L0000408    , L0000409    ,

L0000410    , L0000411    , L0000412    , L0000413    , L0000414    , L0000415    ,
L0000416    , L0000417    ,

L0000418    , L0000419    , L0000420    , L0000421    , L0000422    , L0000423    ,
L0000424    , L0000425    ,

L0000426    , L0000427    , L0000428    , L0000429    , L0000430    , L0000431    ,
L0000432    , L0000433    ,

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L0000448    , L0000449    ,

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L0000456    , L0000457    ,

L0000458    , L0000459    , L0000460    , L0000461    , L0000462    , L0000463    ,
L0000464    , L0000465    ,

L0000466    , L0000467    , L0000468    , L0000469    , L0000470    , L0000471    ,
L0000472    , L0000473    ,

L0000474    , L0000475    , L0000476    , L0000477    , L0000478    , L0000479    ,
L0000480    , L0000481    ,

L0000482    , L0000483    , L0000484    , L0000485    , L0000486    , L0000487    ,
L0000488    , L0000489    ,

L0000490    , L0000491    , L0000492    , L0000493    , L0000494    , L0000495    ,
L0000496    , L0000497    ,
```

*** AERMOD – VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET – VERSION 16216 ***
 ***   ***   11:35:02

                  PAGE 11
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

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

```
         L0000498    , L0000499    , L0000500    , L0000501    , L0000502    , L0000503    ,
         L0000504    , L0000505    ,

         L0000506    , L0000507    , L0000508    , L0000509    , L0000510    , L0000511    ,
         L0000512    , L0000513    ,

         L0000514    , L0000515    , L0000516    , L0000517    , L0000518    , L0000519    ,
         L0000520    , L0000521    ,

         L0000522    , L0000523    , L0000524    , L0000525    , L0000526    , L0000527    ,
         L0000528    , L0000529    ,

         L0000530    , L0000531    , L0000532    , L0000533    , L0000534    , L0000535    ,
         L0000536    , L0000537    ,

         L0000538    , L0000539    , L0000540    , L0000541    , L0000542    ,
```

██ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

                  PAGE 12
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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


  ( 450497.4, 3769490.5,    301.2,     301.2,       0.0);       ( 450800.7, 3769496.4,
    301.2,     301.2,      0.0);
  ( 450844.7, 3769482.7,    300.8,     300.8,       0.0);       ( 450443.3, 3769464.3,
    300.9,     300.9,      0.0);
  ( 450501.5, 3769327.5,    299.2,     299.2,       0.0);       ( 450500.6, 3769279.8,
    298.7,     298.7,      0.0);
  ( 450904.5, 3769273.6,    298.7,     298.7,       0.0);       ( 450904.5, 3769256.7,
    298.3,     298.3,      0.0);
  ( 451224.7, 3769252.7,    296.5,     296.5,       0.0);       ( 451223.3, 3769282.5,
    297.0,     297.0,      0.0);
  ( 451085.8, 3769299.7,    297.7,     297.7,       0.0);       ( 451203.8, 3769285.4,
    297.1,     297.1,      0.0);
  ( 450660.4, 3769097.0,    298.3,     298.3,       0.0);       ( 451202.0, 3769091.5,
    294.3,     294.3,      0.0);
  ( 450843.3, 3769093.9,    296.0,     296.0,       0.0);       ( 451065.3, 3769091.5,
    295.0,     295.0,      0.0);
  ( 450488.4, 3769125.6,    297.5,     297.5,       0.0);       ( 450365.0, 3769200.8,
    297.4,     297.4,      0.0);
  ( 449491.0, 3769987.6,    306.4,     306.4,       0.0);       ( 451310.5, 3769494.7,
    298.9,     298.9,      0.0);
  ( 451571.6, 3769299.6,    300.9,     300.9,       0.0);       ( 451412.2, 3769298.4,
    297.6,     297.6,      0.0);
  ( 451467.2, 3769186.0,    296.7,     296.7,       0.0);       ( 449272.9, 3769950.8,
    304.9,     304.9,      0.0);
  ( 449463.3, 3769963.2,    305.9,     305.9,       0.0);       ( 449418.9, 3769937.8,
    305.4,     305.4,      0.0);
  ( 449134.5, 3770074.5,    305.9,     305.9,       0.0);       ( 448757.9, 3770086.1,
    305.4,     305.4,      0.0);
  ( 451123.0, 3769118.2,    295.2,     295.2,       0.0);       ( 453236.6, 3767558.9,
    279.1,     279.1,      0.0);
  ( 453308.3, 3767535.1,    279.2,     279.2,       0.0);       ( 453281.0, 3767662.3,
    280.5,     280.5,      0.0);
  ( 453784.7, 3767275.2,    274.3,     274.3,       0.0);       ( 453764.7, 3767244.9,
    273.9,     273.9,      0.0);
  ( 448293.4, 3770898.6,    316.0,     316.0,       0.0);       ( 448374.2, 3771008.4,
    318.1,     318.1,      0.0);
  ( 448407.8, 3771051.1,    318.9,     318.9,       0.0);       ( 451567.7, 3769513.9,
    304.1,     304.1,      0.0);
```

```
( 451567.3, 3769558.7,     304.5,     304.5,      0.0);          ( 451504.3, 3769499.8,
  301.8,     301.8,      0.0);
( 451404.2, 3769478.0,     299.6,     299.6,      0.0);          ( 451080.2, 3769366.8,
  298.5,     298.5,      0.0);
( 451083.4, 3769345.3,     298.2,     298.2,      0.0);          ( 451855.6, 3769413.3,
  300.9,     300.9,      0.0);
( 451858.8, 3769297.5,     299.2,     299.2,      0.0);          ( 451877.2, 3769588.2,
  303.3,     303.3,      0.0);
( 451769.8, 3769173.3,     296.9,     296.9,
  0.0);
```

PAGE   13
 *** 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

          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,

PAGE   14
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

   Surface file:
   KONT_V9_ADJU\KONT_v9.SFC   Met
   Version: 16216
   Profile file:
   KONT_V9_ADJU\KONT_v9.PFL
   Surface format:
   FREE

   Profile format:

```
   FREE

   Surface station no.:     3102              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  -16.4  0.171 -9.000 -9.000 -999.  170.      32.3  0.09   1.12   1.00     2.03
 43.    7.9  285.9    2.0
 12 01 01   1 02  -18.8  0.194 -9.000 -9.000 -999.  205.      41.3  0.09   1.12   1.00     2.28
 34.    7.9  285.4    2.0
 12 01 01   1 03  -17.8  0.182 -9.000 -9.000 -999.  187.      36.5  0.09   1.12   1.00     2.15
 24.    7.9  282.0    2.0
 12 01 01   1 04   -9.4  0.128 -9.000 -9.000 -999.  110.      19.6  0.09   1.12   1.00     1.55
 41.    7.9  283.1    2.0
 12 01 01   1 05  -16.9  0.173 -9.000 -9.000 -999.  173.      33.0  0.09   1.12   1.00     2.05
 39.    7.9  280.4    2.0
 12 01 01   1 06   -8.0  0.117 -9.000 -9.000 -999.   97.      17.8  0.09   1.12   1.00     1.43
 21.    7.9  282.0    2.0
 12 01 01   1 07   -7.6  0.115 -9.000 -9.000 -999.   93.      17.4  0.09   1.12   1.00     1.40
 31.    7.9  282.5    2.0
 12 01 01   1 08  -13.6  0.184 -9.000 -9.000 -999.  190.      40.5  0.09   1.12   0.54     2.16
 34.    7.9  284.2    2.0
 12 01 01   1 09   28.4  0.126  0.300  0.011   33.  108.      -6.2  0.09   1.12   0.32     1.03
 29.    7.9  289.2    2.0
 12 01 01   1 10   79.8  0.133  0.607  0.010   99.  116.      -2.6  0.09   1.12   0.25     0.94
 173.   7.9  292.5    2.0
 12 01 01   1 11  115.8  0.137  0.932  0.006  246.  121.      -2.0  0.09   1.12   0.22     0.92
 172.   7.9  295.4    2.0
 12 01 01   1 12  133.7  0.139  1.197  0.005  453.  125.      -1.8  0.09   1.12   0.21     0.92
 146.   7.9  297.5    2.0
 12 01 01   1 13  133.2  0.160  1.354  0.005  657.  153.      -2.7  0.09   1.12   0.21     1.14
 117.   7.9  299.9    2.0
 12 01 01   1 14  113.5  0.159  1.454  0.005  955.  151.      -3.1  0.09   1.12   0.23     1.16
 285.   7.9  300.9    2.0
 12 01 01   1 15   76.2  0.166  1.350  0.005 1138.  163.      -5.3  0.09   1.12   0.26     1.33
 72.    7.9  302.0    2.0
 12 01 01   1 16   23.5  0.175  0.925  0.005 1183.  175.     -19.9  0.09   1.12   0.35     1.65
 107.   7.9  301.4    2.0
 12 01 01   1 17   -6.1  0.107 -9.000 -9.000 -999.   86.      18.0  0.09   1.12   0.63     1.31
 107.   7.9  298.1    2.0
 12 01 01   1 18  -11.1  0.141 -9.000 -9.000 -999.  127.      22.1  0.09   1.12   1.00     1.69
 86.    7.9  293.1    2.0
 12 01 01   1 19   -3.2  0.076 -9.000 -9.000 -999.   51.      11.8  0.09   1.12   1.00     0.91
 64.    7.9  292.0    2.0
 12 01 01   1 20   -2.3  0.066 -9.000 -9.000 -999.   41.      11.2  0.09   1.12   1.00     0.74
 73.    7.9  288.8    2.0
 12 01 01   1 21  -10.0  0.133 -9.000 -9.000 -999.  116.      20.5  0.09   1.12   1.00     1.60
 14.    7.9  288.1    2.0
 12 01 01   1 22  -19.4  0.201 -9.000 -9.000 -999.  216.      44.5  0.09   1.12   1.00     2.36
 22.    7.9  287.5    2.0
 12 01 01   1 23  -23.7  0.246 -9.000 -9.000 -999.  293.      66.5  0.09   1.12   1.00     2.86
 40.    7.9  287.0    2.0
 12 01 01   1 24  -12.3  0.147 -9.000 -9.000 -999.  139.      23.8  0.09   1.12   1.00     1.76
 40.    7.9  283.8    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 12 01 01 01    7.9 1   43.    2.03   286.0  99.0  -99.00  -99.00
```

 F indicates top of profile (=1) or below (=0)
 🔳 *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

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

                       *** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER 5 YEARS FOR
                       SOURCE GROUP: ALL   ***
                                      INCLUDING SOURCE(S):   L0000338 , L0000339   ,
                                      L0000340   , L0000341   , L0000342   ,
                  L0000343   , L0000344   , L0000345   , L0000346   , L0000347   ,
                  L0000348   , L0000349   , L0000350   ,
                  L0000351   , L0000352   , L0000353   , L0000354   , L0000355   ,
                  L0000356   , L0000357   , L0000358   ,
                  L0000359   , L0000360   , L0000361   , L0000362   , L0000363   ,
                  L0000364   , L0000365   , . . .   ,

                                      *** 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
- -
- - - - - - - - - - - - - -
      450497.39   3769490.46   0.00050   450800.72
      3769496.41   0.00096
      450844.74   3769482.73   0.00110   450443.26
      3769464.29   0.00045
      450501.53   3769327.46   0.00126   450500.56
      3769279.81   0.00163
      450904.52   3769273.57   0.00417   450904.52
      3769256.68   0.00368
      451224.66   3769252.72   0.00132   451223.34
      3769282.54   0.00101
      451085.83   3769299.70   0.00132   451203.81
      3769285.44   0.00103
      450660.39   3769097.00   0.00113   451201.96
      3769091.46   0.00042
      450843.34   3769093.95   0.00086   451065.35
      3769091.46   0.00051
      450488.39   3769125.56   0.00087   450365.04
      3769200.78   0.00048
      449490.95   3769987.56   0.00003   451310.46
      3769494.69   0.00061
      451571.63   3769299.56   0.00077   451412.20
      3769298.37   0.00076
      451467.16   3769185.97   0.00080   449272.92
      3769950.83   0.00003
      449463.32   3769963.25   0.00003   449418.90
      3769937.78   0.00003
      449134.45   3770074.53   0.00002   448757.86
      3770086.14   0.00002
      451123.04   3769118.25   0.00054   453236.59
      3767558.94   0.00001
      453308.35   3767535.11   0.00001   453281.04
      3767662.29   0.00001
      453784.70   3767275.20   0.00001   453764.70
      3767244.94   0.00001
      448293.38   3770898.58   0.00001   448374.25
      3771008.42   0.00001
      448407.77   3771051.14   0.00001   451567.70

```
           3769513.90         0.00065
           451567.29    3769558.70         0.00063                      451504.33
           3769499.78         0.00054
           451404.23    3769477.98         0.00056                      451080.25
           3769366.84         0.00131
           451083.41    3769345.35         0.00132                      451855.58
           3769413.29         0.00038
           451858.79    3769297.51         0.00034                      451877.19
           3769588.22         0.00036
           451769.79    3769173.32
           0.00032
```

▉▉ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

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

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

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

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

ALL   1ST HIGHEST VALUE IS   0.00417 AT (450904.52, 3769273.57,   298.65,
298.65,   0.00) DC
         2ND HIGHEST VALUE IS   0.00368 AT (450904.52, 3769256.68,   298.30,
         298.30,   0.00) DC
         3RD HIGHEST VALUE IS   0.00163 AT (450500.56, 3769279.81,   298.74,
         298.74,   0.00) DC
         4TH HIGHEST VALUE IS   0.00132 AT (451085.83, 3769299.70,   297.72,
         297.72,   0.00) DC
         5TH HIGHEST VALUE IS   0.00132 AT (451083.41, 3769345.35,   298.25,
         298.25,   0.00) DC
         6TH HIGHEST VALUE IS   0.00132 AT (451224.66, 3769252.72,   296.51,
         296.51,   0.00) DC
         7TH HIGHEST VALUE IS   0.00131 AT (451080.25, 3769366.84,   298.50,
         298.50,   0.00) DC
         8TH HIGHEST VALUE IS   0.00126 AT (450501.53, 3769327.46,   299.22,
         299.22,   0.00) DC
         9TH HIGHEST VALUE IS   0.00113 AT (450660.39, 3769097.00,   298.29,
         298.29,   0.00) DC
         10TH HIGHEST VALUE IS   0.00110 AT (450844.74, 3769482.73,   300.84,
         300.84,   0.00) DC

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

▉▉ *** AERMOD - VERSION 21112 ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14539 IE
Distribution\14539 Ops ***   08/23/22
 *** AERMET - VERSION 16216 ***
 ***   ***   11:35:02

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```
 *** 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          1628 Informational Message(s)

 A Total of         43848 Hours Were Processed

 A Total of          1278 Calm Hours Identified

 A Total of           350 Missing Hours Identified (  0.80 Percent)


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


     ********   WARNING MESSAGES   ********
 ME W186      540        MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187      540        MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

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

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APPENDIX 2.4:

RISK CALCULATIONS

Table 1
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
0-2 Age Bin Exposure Scenario - Construction Activity

Source	Mass GLC		Weight	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**									
			Fraction		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)
	0.00001	1.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	7.5E-09	9.1E-10	5.0E+00	1.4E-03	2.0E-06							
TOTAL								9.1E-10			2.0E-06	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)	250
exposure duration (years)	0.96
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
(a)	(ug/m^3) (b)	(mg/m^3) (c)	(d)	(e)	(ug/m^3)$^{-1}$ (f)	(mg/kg/day)$^{-1}$ (g)	(mg/kg-day) (h)	(i)	(ug/m^3) (j)	(mg/kg/day) (k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00001	1.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	5.5E-09	2.4E-09	5.0E+00	1.4E-03	2.0E-06							
TOTAL								2.4E-09			2.0E-06	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)	13.23
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	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**									
			Fraction		URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			$(ug/m^3)^{-1}$	$(mg/kg/day)^{-1}$	$(mg/kg\text{-}day)$		(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)
	0.00001	1.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	2.5E-09	3.8E-10	5.0E+00	1.4E-03	2.0E-06							
TOTAL								3.8E-10			2.0E-06	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)   0.004

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

Source	Mass GLC		Weight	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**									
			Fraction		URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			$(ug/m^3)^{-1}$	$(mg/kg/day)^{-1}$	$(mg/kg\text{-}day)$		(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)
	0.00001	1.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	3.5E-09	1.1E-10	5.0E+00	1.4E-03	2.0E-06							
TOTAL								1.1E-10			2.0E-06	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	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**									
			Fraction		URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			$(ug/m^3)^{-1}$	$(mg/kg/day)^{-1}$	$(mg/kg\text{-}day)$		(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)
	0.00001	1.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	1.0E-08	2.7E-09	5.0E+00	1.4E-03	2.0E-06							
TOTAL								2.7E-09			2.0E-06	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**									
	(ug/m^3)	(mg/m^3)			URF $(ug/m^3)^{-1}$	CPF $(mg/kg/day)^{-1}$	DOSE $(mg/kg\text{-}day)$	RISK	REL (ug/m^3)	RfD $(mg/kg/day)$	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00001	1.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	5.5E-09	2.5E-09	5.0E+00	1.4E-03	2.0E-06							
TOTAL								2.5E-09			2.0E-06	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	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**									
			Fraction		URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			$(ug/m^3)^{-1}$	$(mg/kg/day)^{-1}$	$(mg/kg\text{-}day)$		(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)
	0.00001	1.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	2.5E-09	3.8E-10	5.0E+00	1.4E-03	2.0E-06							
TOTAL								3.8E-10			2.0E-06	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)   0.006

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

	Source	Mass GLC (ug/m^3)	Mass GLC (mg/m^3)	Weight Fraction	Contaminant	Carcinogenic Risk URF (ug/m^3)$^{-1}$	CPF (mg/kg/day)$^{-1}$	DOSE (mg/kg-day)	RISK	REL (ug/m^3)	RfD (mg/kg/day)	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
1	Diesel Particulates	4.17E-03	4.17E-06	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	6.6E-07	2.5E-07	5.0E+00	1.4E-03	8.3E-04							
	TOTAL								2.5E-07 0.25			8.3E-04	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)	250
exposure duration (years)	25
inhalation rate (L/kg-day))	230
inhalation absorption factor	1
averaging time (years)	70

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