

# ***Ldn Consulting, Inc.***

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January 31, 2023

Matt McKinlay  
Rexco Development  
1285 Corona Pointe Court Suite 102  
Corona, CA 92879

## **RE: Terrano II Multi-Family Development at Dos Lagos Health Risk - City of Corona**

The purpose of this Air Quality Health Risk screening letter is to identify potential health risks at the proposed project site from toxic air contaminants (TACs) originating from Interstate-15 (I-15). The proposed Project consists of developing a 50-unit apartment complex within the Dos Lagos Specific Plan. The project site is located within the City of Corona, CA.

This health risk analysis uses the California Office of Environmental Health Hazard Assessment (OEHHA) methodologies (Office of Environmental Health Hazard Assessment, 2015) as outlined by the California Air Pollution Control Officers Association (CAPCOA, July 2009).

Health risk impacts can exist when a project is exposed to toxic emissions and have the potential to impact nearby receptor. Sensitive receptors (and the facilities that house them) in proximity to sources of air pollutants that emit TACs are of particular concern. Exposure to TACs can increase the risk of contracting cancer or result in adverse non-cancer health effects. Non-cancer health risks associated with TAC exposure include birth defects and other reproductive damage, neurological disorders, and damage to the respiratory system (California Air Resources Board, 2005).

Generally, cancer risk can exist within 500-feet of a freeway or busy traffic corridor, but the risk will drop off with distance from a ground level pollution source. Freeways and busy traffic corridors are defined as traffic volume of over 100,000 vehicles per day in urban areas and 50,000 vehicles per day in rural areas (Education Code Section 17312). CARB studies show that air pollution levels can be significantly higher within 500 feet (150 meters) of freeways or busy traffic corridors (SCAQMD, 2005). Generally, in Riverside County, this is applied to education facilities however, it's reasonable to assess impacts for residential uses as well.

The City of Corona is generally regulated by South Coast Air Quality Management District (SCAQMD). Under SCAQMD guidance, excess cancer risk significance threshold is set at 10 in a million (SCAQMD, 2015).

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Cancer risk calculations are often presented on a 9, 30 or 70 year lifetime exposure duration. The 9 year exposure scenario is based on exposure to children during the first 9 years of life. Some districts use the 9 year exposure scenario to model short term projects. (CAPCOA, July 2009). For purposes of this analysis, it is reasonable to assume a 30 year duration. For purposes of modeling, AERMOD was used for air quality dispersion modeling and is the preferred/recommended U.S. Environmental Protection Agency (EPA) model for roadway modeling. The software has the ability to incorporate meteorological inputs as well as multiple source and receptor locations and is now used throughout the world. The model input/output is shown in ***Attachment A*** to this letter.

The project is adjacent to I-15 north of Dos Lagos Drive and south of Cajalco Road. According to Caltrans, the peak hour traffic is 11,400 trips and the average daily trips are 164,000 ADT (CALTRANS, 2013 Traffic Volumes on California State Highways, 2013). The EMFAC 2021 model was used to develop specific emissions rates for the ADT on the section modeled with AERMOD which was run for the 2025 scenario and is shown in ***Attachment B*** to this report. The County wide daily VMT from EMFAC was used to develop normalization factors to calculate ADTs by vehicle type (diesel specific) for the I-15 section analyzed which was ultimately used to derive the total diesel particulates in grams/day generated within the I-15 section analyzed. The emissions were then converted to grams/second which was utilized within AERMOD using a series of adjacent volume sources.

Modeling at the site included coordinates for I-15 and five receptor points which were selected from points on the project site (Receptors 1-5) and represent facility facades. The modeled locations are shown in Figure 1.

Based on discussions with the project applicant, all residential homes constructed as part of this project will have mechanical ventilation filtration systems consistent with the latest building codes such as California's Title 24. Typical indoor air filtration systems used within today's heating and ventilation systems within California and consistent with Title 24 have a Minimum Efficiency Reporting Value (MERV) rating of 13 (California Energy Commission, 2019).

The US Environmental Protection Agency indicates that MERV 13 filtration systems reduce particulates between 1 and 3 microns by 85% and particles less than 10 microns (PM<sub>10</sub>) by 90% relative to outdoor ambient air (EPA, 2021).

The annual diesel particulate concentrations at the modeled receptors are summarized below in Table 1 and include the expected reductions within the interior of all residential structures which would have a minimum air filtration system of MERV 13. The modeled output emissions output curves from AERMOD are also shown in Figure 1 below.

**Figure 1: AERMOD Emissions and Graphical Representation**



The annual diesel particulate concentrations at the modeled receptors are summarized below in Table 1 and include the expected reductions within the interior of all residential structures which would have a minimum air filtration system of MERV 13.

**Table 1: Annual DPM Concentrations at each Receptor**

Discreet Receptor AERMOD Name	Concentration (µg/m <sup>3</sup> )
REC 1	0.01735
REC 2	0.01881
REC 3	0.02014
REC 4	0.02142
REC 5	0.02179

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Cancer Risk Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose<sub>air</sub>) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst case cancer risk dose calculation is defined in Equation 1 below (OEHHA, 2015):

*Equation 1*

$$Dose_{air} = C_{air} * (BR/BW) * A * EF * (1 \times 10^{-6})$$

- Dose<sub>air</sub> = Dose through inhalation (mg/kg/d)
- C<sub>air</sub> = Concentration in air (µg/m<sup>3</sup>) Annual average DPM concentration in µg/m<sup>3</sup> – AERMOD
- BR/BW = Daily average breathing rates normalized to body weight (L/kg BW-day).
- A = Inhalation absorption factor (assumed to be 1)
- EF = Exposure frequency (unitless, days/365 days)
- 1x10<sup>-6</sup> = Milligrams to micrograms conversion (10<sup>-3</sup> mg/ µg), cubic meters to liters conversion (10<sup>-3</sup> m<sup>3</sup>/l)

Once the dose is determined then you must calculate the cancer risk. The average daily inhalation dose (mg/kg-day) multiplied by the cancer potency factor (mg/kg-day)<sup>-1</sup> will give the inhalation cancer risk (unitless), which is an expression of the chemical’s cancer risk during exposure. For example, an inhalation cancer risk of 5 x 10<sup>-6</sup> is the same as stating that an

individual has an estimated probability of developing cancer from their exposure of 5 chances per million people exposed.

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. As described below, the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. The worst-case cancer risk calculation is defined in Equation 2 below (OEHHA, 2015).

*Equation 2*  $RISK_{inh-res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$

- RISK<sub>inh-res</sub> = Residential inhalation cancer risk
- DOSE<sub>air</sub> = Daily inhalation dose (mg/kg-day)
- CPF = Inhalation cancer potency factor (mg/kg-day<sup>-1</sup>)
- ASF = Age sensitivity factor for a specified age group (unitless)
- ED = Exposure duration (in years) for a specified age group
- AT = Averaging time for lifetime cancer risk (years)
- FAH = Fraction of time spent at home (unitless)

The results of the cancer risk calculations are shown in Table 2 below. The detailed model input/output is also provided as **Attachment C** to this report. Based on these calculations, cancer risks from DPM generated from SR-125 would not exceed the 10 per one million exposed thresholds within any units constructed within the Otoy Village 8 area.

**Table 2: Cancer Risk at Worst-Case Indoor Receptors (MERV 8 Design Feature)**

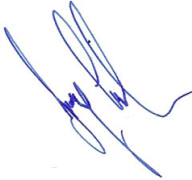
Receptor	C <sub>i</sub>	Unmitigated Cancer Risk (30 Years)	Potential Impact
REC 1	0.01735	7.19	No
REC 2	0.01881	7.80	No
REC 3	0.02014	8.35	No
REC 4	0.02142	8.88	No
REC 5	0.02179	9.03	No
<small>C<sub>i</sub> annual inputs from AERMOD within prospective building.            Cancer Risk = DOSE<sub>air</sub> × CPF × ASF × ED/AT × FAH</small>			

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It is important to note that this assessment serves simply as a disclosure document to providing a characterization of the background emissions that occupants of the proposed project may be exposed to. If you should have any questions regarding this assessment, please do not hesitate to contact me at (760) 473-1253.

Sincerely,  
Ldn Consulting, Inc.



Jeremy Loudon

**Attachments:**

- A: AERMOD
- B: EMFAC 2021 Emission Factors – 2025
- C: Cancer Risk Calculations – Indoor

**References:**

- California Air Resources Board. (2005). AIR QUALITY AND LAND USE HANDBOOK. Retrieved 2016, from <http://www.arb.ca.gov/ch/handbook.pdf>
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AERMOD PRIME - (DATED 19191)

AERMODPrMSPx VERSION  
(C) COPYRIGHT 1998-2017, Trinity Consultants

Run Began on 1/28/2023 at 12:12:49

\*\* BREEZE AERMOD  
\*\* Trinity Consultants  
\*\* VERSION 10.0

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CO TITLEONE I15 Roadway Emissions  
CO MODELOPT DEFAULT CONC NODRYDPLT NOWETDPLT  
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\*\* SENSITIV  
\*\* RCPDESCR REC5  
RE FINISHED

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ME UAIRDATA 3190 2008  
ME PROFBASE 3 METERS  
ME STARTEND 2011 1 1 1 2012 12 31 24  
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OU FINISHED

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se\_Mercator"],PARAMETER["Zone",11],UNIT["Meter",1,AUTHORITY["EPSG","9001"]]]  
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\*\* UNITS METER  
\*\* ZONE 11  
\*\* HEMISPHERE N  
\*\* ORIGINLON 0  
\*\* ORIGINLAT 0  
\*\* PARALLEL1 0  
\*\* PARALLEL2 0  
\*\* AZIMUTH 0  
\*\* SCALEFACT 0  
\*\* FALSEEAST 0  
\*\* FALSENORTH 0

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\*\* TEMPLATE UserDefined  
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\*\* AERMAPEXE AERMAP\_EPA\_11103.EXE

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▲ \*\*\* AERMOD - VERSION 19191 \*\*\* \*\*\* I15 Roadway Emissions \*\*\*  
01/28/23  
\*\*\* AERMET - VERSION 14134 \*\*\* \*\*\* \*\*\*  
12:12:49

PAGE 1

\*\*\* MODELOPTs: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* 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 RURAL Dispersion Only.

\*\*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.

\*\*Other Options Specified:

TEMP\_Sub - Meteorological data includes TEMP substitutions

\*\*Model Assumes No FLAGPOLE Receptor Heights.

\*\*The User Specified a Pollutant Type of: PM10

\*\*Model Calculates ANNUAL Averages Only

\*\*This Run Includes: 35 Source(s); 1 Source Group(s); and 446 Receptor(s)

with: 0 POINT(s), including  
0 POINTCAP(s) and 0 POINTHOR(s)  
and: 35 VOLUME source(s)  
and: 0 AREA type source(s)  
and: 0 LINE source(s)  
and: 0 RLINE/RLINEXT source(s)  
and: 0 OPENPIT source(s)  
and: 0 BUOYANT LINE source(s) with 0 line(s)

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

\*\*The AERMET Input Meteorological Data Version Date: 14134

\*\*Output Options Selected:

Model Outputs Tables of ANNUAL Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE 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) = 3.00 ; 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

^ \*\*\* AERMOD - VERSION 19191 \*\*\* I15 Roadway Emissions \*\*\*  
 01/28/23  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
 12:12:49

PAGE 2  
 \*\*\* MODELOPTS: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* VOLUME SOURCE DATA \*\*\*

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
ASNLR058	0	0.11215E-04	452857.3	3741276.7	0.0	3.00	10.23	2.79	NO	
ASNLR059	0	0.11215E-04	452866.1	3741256.5	0.0	3.00	10.23	2.79	NO	
ASNLR05A	0	0.11215E-04	452874.9	3741236.4	0.0	3.00	10.23	2.79	NO	
ASNLR05B	0	0.11215E-04	452883.6	3741216.2	0.0	3.00	10.23	2.79	NO	
ASNLR05C	0	0.11215E-04	452892.4	3741196.0	0.0	3.00	10.23	2.79	NO	
ASNLR05D	0	0.11215E-04	452901.2	3741175.9	0.0	3.00	10.23	2.79	NO	
ASNLR05E	0	0.11215E-04	452910.0	3741155.7	0.0	3.00	10.23	2.79	NO	
ASNLR05F	0	0.11215E-04	452918.8	3741135.5	0.0	3.00	10.23	2.79	NO	
ASNLR05G	0	0.11215E-04	452927.5	3741115.3	0.0	3.00	10.23	2.79	NO	
ASNLR05H	0	0.11215E-04	452936.3	3741095.2	0.0	3.00	10.23	2.79	NO	
ASNLR05I	0	0.11215E-04	452945.1	3741075.0	0.0	3.00	10.23	2.79	NO	
ASNLR05J	0	0.11215E-04	452953.9	3741054.8	0.0	3.00	10.23	2.79	NO	
ASNLR05K	0	0.11215E-04	452962.7	3741034.7	0.0	3.00	10.23	2.79	NO	
ASNLR05L	0	0.11215E-04	452971.4	3741014.5	0.0	3.00	10.23	2.79	NO	
ASNLR05M	0	0.11215E-04	452980.2	3740994.3	0.0	3.00	10.23	2.79	NO	
ASNLR05N	0	0.11215E-04	452989.0	3740974.1	0.0	3.00	10.23	2.79	NO	
ASNLR05O	0	0.11215E-04	452997.8	3740954.0	0.0	3.00	10.23	2.79	NO	
ASNLR05P	0	0.11215E-04	453006.6	3740933.8	0.0	3.00	10.23	2.79	NO	
ASNLR05Q	0	0.11215E-04	453015.4	3740913.6	0.0	3.00	10.23	2.79	NO	
ASNLR05R	0	0.11215E-04	453024.1	3740893.5	0.0	3.00	10.23	2.79	NO	
ASNLR05S	0	0.11215E-04	453032.9	3740873.3	0.0	3.00	10.23	2.79	NO	
ASNLR05T	0	0.11215E-04	453041.7	3740853.1	0.0	3.00	10.23	2.79	NO	
ASNLR05U	0	0.11215E-04	453050.5	3740832.9	0.0	3.00	10.23	2.79	NO	
ASNLR05V	0	0.11215E-04	453059.3	3740812.8	0.0	3.00	10.23	2.79	NO	
ASNLR05W	0	0.11215E-04	453068.0	3740792.6	0.0	3.00	10.23	2.79	NO	
ASNLR05X	0	0.11215E-04	453076.8	3740772.4	0.0	3.00	10.23	2.79	NO	
ASNLR05Y	0	0.11215E-04	453085.6	3740752.3	0.0	3.00	10.23	2.79	NO	
ASNLR05Z	0	0.11215E-04	453094.4	3740732.1	0.0	3.00	10.23	2.79	NO	
ASNLR060	0	0.11215E-04	453103.2	3740711.9	0.0	3.00	10.23	2.79	NO	
ASNLR061	0	0.11215E-04	453112.0	3740691.7	0.0	3.00	10.23	2.79	NO	
ASNLR062	0	0.11215E-04	453120.7	3740671.6	0.0	3.00	10.23	2.79	NO	
ASNLR063	0	0.11215E-04	453129.5	3740651.4	0.0	3.00	10.23	2.79	NO	
ASNLR064	0	0.11215E-04	453138.3	3740631.2	0.0	3.00	10.23	2.79	NO	
ASNLR065	0	0.11215E-04	453147.1	3740611.1	0.0	3.00	10.23	2.79	NO	
ASNLR066	0	0.11215E-04	453155.9	3740590.9	0.0	3.00	10.23	2.79	NO	

^ \*\*\* AERMOD - VERSION 19191 \*\*\* I15 Roadway Emissions \*\*\*  
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 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
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 \*\*\* MODELOPTS: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* SOURCE IDs DEFINING SOURCE GROUPS \*\*\*

SRCGROUP ID SOURCE IDs  
 -----



1.50	1.50							
3740895.43		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3740929.52		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3740963.61		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3740997.70		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3741031.79		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3741065.88		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3741099.97		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3741134.06		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3741168.15		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3741202.24		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3741236.33		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3741270.42		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3741304.51		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3741338.60		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							

^ \*\*\* AERMOD - VERSION 19191 \*\*\* \*\*\* I15 Roadway Emissions \*\*\*  
 01/28/23  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
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 \*\*\* MODELOPTs: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* NETWORK ID: ASNLR069 ; NETWORK TYPE: GRIDCART \*\*\*

\* ELEVATION HEIGHTS IN METERS \*

Y-COORD (METERS)		453165.82	453197.65	453229.48	X-COORD (METERS)	453261.32	453293.15	453324.99	453356.83
453388.66		453420.49							

3740656.80		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50								
3740690.89		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50								
3740724.98		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50								
3740759.07		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50								
3740793.16		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50								
3740827.25		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50								
3740861.34		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50								
3740895.43		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50								
3740929.52		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50								
3740963.61		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50								
3740997.70		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50								

3741031.79		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50		1.50						
3741065.88		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50		1.50						
3741099.97		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50		1.50						
3741134.06		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50		1.50						
3741168.15		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50		1.50						
3741202.24		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50		1.50						
3741236.33		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50		1.50						
3741270.42		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50		1.50						
3741304.51		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50		1.50						
3741338.60		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50		1.50						

^ \*\*\* AERMOD - VERSION 19191 \*\*\* \*\*\* I15 Roadway Emissions \*\*\*  
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 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
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 \*\*\* MODELOPTs: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* NETWORK ID: ASNLR069 ; NETWORK TYPE: GRIDCART \*\*\*

\* ELEVATION HEIGHTS IN METERS \*

Y-COORD (METERS)			X-COORD (METERS)
	453452.33	453484.16	453516.00
-----			
-----			
3740656.80		1.50	1.50
3740690.89		1.50	1.50
3740724.98		1.50	1.50
3740759.07		1.50	1.50
3740793.16		1.50	1.50
3740827.25		1.50	1.50
3740861.34		1.50	1.50
3740895.43		1.50	1.50
3740929.52		1.50	1.50
3740963.61		1.50	1.50
3740997.70		1.50	1.50
3741031.79		1.50	1.50
3741065.88		1.50	1.50
3741099.97		1.50	1.50
3741134.06		1.50	1.50
3741168.15		1.50	1.50
3741202.24		1.50	1.50
3741236.33		1.50	1.50
3741270.42		1.50	1.50
3741304.51		1.50	1.50
3741338.60		1.50	1.50

^ \*\*\* AERMOD - VERSION 19191 \*\*\* \*\*\* I15 Roadway Emissions \*\*\*  
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 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
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 \*\*\* MODELOPTs: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* NETWORK ID: ASNLR069 ; NETWORK TYPE: GRIDCART \*\*\*

\* HILL HEIGHT SCALES IN METERS \*



Y-COORD (METERS)	452879.30	452911.14	452942.97	X-COORD (METERS)	452974.80	453006.64	453038.47	453070.31
453102.14	453133.98							

3740656.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3740690.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3740724.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3740759.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3740793.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3740827.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3740861.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3740895.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3740929.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3740963.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3740997.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3741031.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3741065.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3741099.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3741134.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3741168.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3741202.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3741236.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3741270.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3741304.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
3741338.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							

\*\*\* AERMOD - VERSION 19191 \*\*\* I15 Roadway Emissions \*\*\*  
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 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
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 \*\*\* MODELOPTs: RegDFault CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* NETWORK ID: ASNLR069 ; NETWORK TYPE: GRIDCART \*\*\*

\* HILL HEIGHT SCALES IN METERS \*

Y-COORD (METERS)	453165.82	453197.65	453229.48	X-COORD (METERS)	453261.32	453293.15	453324.99	453356.83
453388.66	453420.49							

3740656.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							

3740690.89		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3740724.98		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3740759.07		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3740793.16		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3740827.25		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3740861.34		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3740895.43		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3740929.52		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3740963.61		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3740997.70		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3741031.79		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3741065.88		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3741099.97		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3741134.06		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3741168.15		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3741202.24		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3741236.33		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3741270.42		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3741304.51		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						
3741338.60		0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		0.00						

▲ \*\*\* AERMOD - VERSION 19191 \*\*\* \*\*\* I15 Roadway Emissions \*\*\*  
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\*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* NETWORK ID: ASNLR069 ; NETWORK TYPE: GRIDCART \*\*\*

\* HILL HEIGHT SCALES IN METERS \*

Y-COORD (METERS)				X-COORD (METERS)
	453452.33	453484.16	453516.00	
3740656.80		0.00	0.00	0.00
3740690.89		0.00	0.00	0.00
3740724.98		0.00	0.00	0.00
3740759.07		0.00	0.00	0.00
3740793.16		0.00	0.00	0.00
3740827.25		0.00	0.00	0.00
3740861.34		0.00	0.00	0.00
3740895.43		0.00	0.00	0.00
3740929.52		0.00	0.00	0.00
3740963.61		0.00	0.00	0.00
3740997.70		0.00	0.00	0.00
3741031.79		0.00	0.00	0.00

3741065.88	0.00	0.00	0.00
3741099.97	0.00	0.00	0.00
3741134.06	0.00	0.00	0.00
3741168.15	0.00	0.00	0.00
3741202.24	0.00	0.00	0.00
3741236.33	0.00	0.00	0.00
3741270.42	0.00	0.00	0.00
3741304.51	0.00	0.00	0.00
3741338.60	0.00	0.00	0.00

^ \*\*\* AERMOD - VERSION 19191 \*\*\* \*\*\* I15 Roadway Emissions \*\*\*  
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 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
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 \*\*\* MODELOPTs: RegDFault CONC ELEV NODRYDPLT NOWETDPLT RURAL

\* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED \*  
 LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE ID	- - RECEPTOR XR (METERS)	LOCATION - - YR (METERS)	DISTANCE (METERS)
ASNLR058	452879.3	3741270.4	0.88
ASNLR059	452879.3	3741270.4	-2.82
ASNLR05A	452879.3	3741236.3	-17.60
ASNLR05B	452879.3	3741236.3	-1.42
ASNLR05B	452879.3	3741202.2	-7.39
ASNLR05C	452879.3	3741202.2	-7.49
ASNLR05C	452911.1	3741202.2	-2.25
ASNLR05D	452911.1	3741168.1	-9.40
ASNLR05E	452911.1	3741168.1	-9.50
ASNLR05E	452911.1	3741134.1	-0.33
ASNLR05F	452911.1	3741134.1	-14.20
ASNLR05G	452911.1	3741100.0	0.42
ASNLR05G	452943.0	3741100.0	-0.22
ASNLR05H	452943.0	3741100.0	-13.80
ASNLR05I	452943.0	3741065.9	-12.63
ASNLR05J	452943.0	3741065.9	-6.44
ASNLR05K	452943.0	3741031.8	-2.06
ASNLR05K	452974.8	3741031.8	-9.55
ASNLR05L	452974.8	3741031.8	-4.38
ASNLR05L	452974.8	3740997.7	-4.86
ASNLR05M	452974.8	3740997.7	-15.62
ASNLR05N	452974.8	3740963.6	-4.35
ASNLR05N	453006.6	3740963.6	-1.48
ASNLR05O	453006.6	3740963.6	-8.94
ASNLR05P	453006.6	3740929.5	-17.72
ASNLR05Q	453006.6	3740929.5	-3.83
ASNLR05Q	453006.6	3740895.4	-1.83
ASNLR05R	453006.6	3740895.4	-4.43
ASNLR05R	453038.5	3740895.4	-7.50
ASNLR05S	453038.5	3740895.4	0.82
ASNLR05S	453038.5	3740861.3	-8.80
ASNLR05T	453038.5	3740861.3	-13.15
ASNLR05U	453038.5	3740827.2	-8.71
ASNLR05U	453070.3	3740827.2	-1.40
ASNLR05V	453070.3	3740827.2	-3.83
ASNLR05V	453070.3	3740793.2	0.52
ASNLR05W	453070.3	3740793.2	-19.62
ASNLR05X	453070.3	3740793.2	-0.25
ASNLR05X	453070.3	3740759.1	-7.17
ASNLR05Y	453070.3	3740759.1	-5.28

^ \*\*\* AERMOD - VERSION 19191 \*\*\* \*\*\* I15 Roadway Emissions \*\*\*  
 01/28/23  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
 12:12:49



Surface file: C:\USERS\RYAN\ONEDRIVE\LDNONE~1\CI9EA3~1\22-161~1\HRA\SUBMIT~1\BREEZE~1\ELSI8.SF Met Version:  
 14134  
 Profile file: C:\USERS\RYAN\ONEDRIVE\LDNONE~1\CI9EA3~1\22-161~1\HRA\SUBMIT~1\BREEZE~1\ELSI8.PF  
 Surface format: FREE

Profile format: FREE

Surface station no.: 0 Upper air station no.: 3190  
 Name: UNKNOWN Name: UNKNOWN  
 Year: 2008 Year: 2008

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
08	01	01	1	01	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	284.2			
					5.5																
08	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	283.1			
					5.5																
08	01	01	1	03	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	283.1			
					5.5																
08	01	01	1	04	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	283.8			
					5.5																
08	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	283.8			
					5.5																
08	01	01	1	06	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	283.8			
					5.5																
08	01	01	1	07	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	283.1			
					5.5																
08	01	01	1	08	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	0.54	999.00	999.	-9.0	283.8			
					5.5																
08	01	01	1	09	27.2	-9.000	-9.000	-9.000	60.	-999.	-999999.0	0.23	1.00	0.33	999.00	999.	-9.0	285.9			
					5.5																
08	01	01	1	10	74.6	-9.000	-9.000	-9.000	157.	-999.	-999999.0	0.23	1.00	0.25	999.00	999.	-9.0	288.1			
					5.5																
08	01	01	1	11	107.4	-9.000	-9.000	-9.000	375.	-999.	-999999.0	0.23	1.00	0.23	999.00	999.	-9.0	289.9			
					5.5																
08	01	01	1	12	122.7	-9.000	-9.000	-9.000	578.	-999.	-999999.0	0.23	1.00	0.22	999.00	999.	-9.0	289.9			
					5.5																
08	01	01	1	13	121.3	-9.000	-9.000	-9.000	714.	-999.	-999999.0	0.23	1.00	0.22	999.00	999.	-9.0	291.4			
					5.5																
08	01	01	1	14	102.1	-9.000	-9.000	-9.000	763.	-999.	-999999.0	0.23	1.00	0.23	999.00	999.	-9.0	292.0			
					5.5																
08	01	01	1	15	65.8	-9.000	-9.000	-9.000	792.	-999.	-999999.0	0.23	1.00	0.27	999.00	999.	-9.0	291.4			
					5.5																
08	01	01	1	16	16.0	-9.000	-9.000	-9.000	798.	-999.	-999999.0	0.23	1.00	0.36	999.00	999.	-9.0	290.4			
					5.5																
08	01	01	1	17	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	0.63	999.00	999.	-9.0	288.8			
					5.5																
08	01	01	1	18	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	287.5			
					5.5																
08	01	01	1	19	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	286.4			
					5.5																
08	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	285.4			
					5.5																
08	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	284.2			
					5.5																
08	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	283.1			
					5.5																
08	01	01	1	23	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	283.1			
					5.5																
08	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-999999.0	0.23	1.00	1.00	999.00	999.	-9.0	282.5			
					5.5																

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
08	01	01	01	5.5	0	-999.	-99.00	284.3	99.0	-99.00	-99.00



0.02013 0.01809  
 3741304.51 | 0.05348 0.04173 0.03443 0.02932 0.02551 0.02252 0.02011  
 0.01812 0.01644  
 3741338.60 | 0.03551 0.03091 0.02732 0.02431 0.02178 0.01964 0.01783  
 0.01627 0.01491  
 \*\*\* AERMOD - VERSION 19191 \*\*\* I15 Roadway Emissions \*\*\*  
 01/28/23  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
 12:12:49

PAGE 16  
 \*\*\* MODELOPTS: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 2 YEARS FOR SOURCE GROUP: ALL  
 \*\*\*  
 INCLUDING SOURCE(S): ASNLR058 , ASNLR059 , ASNLR05A , ASNLR05B ,  
 ASNLR05C , ASNLR05D , ASNLR05E , ASNLR05F , ASNLR05G , ASNLR05H , ASNLR05I , ASNLR05J ,  
 ASNLR05K , ASNLR05L , ASNLR05M , ASNLR05N , ASNLR05O , ASNLR05P , ASNLR05Q , ASNLR05R ,  
 ASNLR05S , ASNLR05T , ASNLR05U , ASNLR05V , ASNLR05W , ASNLR05X , ASNLR05Y , ASNLR05Z ,  
 . . . ,

\*\*\* NETWORK ID: ASNLR069 ; NETWORK TYPE: GRIDCART \*\*\*

\*\* CONC OF PM10 IN MICROGRAMS/M\*\*3 \*\*  
 Y-COORD (METERS) | X-COORD (METERS)  
 453388.66 453165.82 453197.65 453229.48 453261.32 453293.15 453324.99 453356.83  
 453420.49

3740656.80 | 0.08089 0.05457 0.04095 0.03235 0.02646 0.02220 0.01899  
 0.01649 0.01450  
 3740690.89 | 0.07097 0.05140 0.03988 0.03211 0.02652 0.02234 0.01914  
 0.01663 0.01461  
 3740724.98 | 0.06354 0.04810 0.03824 0.03130 0.02615 0.02220 0.01910  
 0.01664 0.01464  
 3740759.07 | 0.05754 0.04491 0.03638 0.03019 0.02549 0.02182 0.01889  
 0.01652 0.01458  
 3740793.16 | 0.05249 0.04190 0.03446 0.02892 0.02464 0.02126 0.01852  
 0.01628 0.01443  
 3740827.25 | 0.04810 0.03907 0.03254 0.02757 0.02369 0.02058 0.01805  
 0.01595 0.01420  
 3740861.34 | 0.04421 0.03642 0.03065 0.02620 0.02268 0.01983 0.01749  
 0.01554 0.01390  
 3740895.43 | 0.04070 0.03393 0.02883 0.02484 0.02165 0.01904 0.01689  
 0.01508 0.01354  
 3740929.52 | 0.03751 0.03160 0.02707 0.02350 0.02061 0.01823 0.01625  
 0.01458 0.01315  
 3740963.61 | 0.03458 0.02941 0.02539 0.02220 0.01959 0.01742 0.01560  
 0.01405 0.01272  
 3740997.70 | 0.03188 0.02735 0.02380 0.02093 0.01858 0.01661 0.01494  
 0.01351 0.01228  
 3741031.79 | 0.02938 0.02542 0.02228 0.01972 0.01759 0.01580 0.01428  
 0.01297 0.01183  
 3741065.88 | 0.02708 0.02361 0.02083 0.01855 0.01664 0.01501 0.01362  
 0.01242 0.01137  
 3741099.97 | 0.02494 0.02191 0.01946 0.01742 0.01571 0.01425 0.01298  
 0.01188 0.01092  
 3741134.06 | 0.02295 0.02032 0.01816 0.01635 0.01482 0.01350 0.01236  
 0.01135 0.01047  
 3741168.15 | 0.02112 0.01883 0.01694 0.01534 0.01397 0.01278 0.01175  
 0.01083 0.01002  
 3741202.24 | 0.01942 0.01744 0.01578 0.01437 0.01315 0.01209 0.01115  
 0.01032 0.00958  
 3741236.33 | 0.01784 0.01614 0.01469 0.01345 0.01237 0.01142 0.01057

0.00982	0.00914							
3741270.42		0.01637	0.01491	0.01366	0.01257	0.01162	0.01077	0.01001
0.00933	0.00872							
3741304.51		0.01501	0.01377	0.01269	0.01174	0.01090	0.01015	0.00947
0.00886	0.00831							
3741338.60		0.01373	0.01269	0.01177	0.01095	0.01021	0.00955	0.00895
0.00841	0.00791							

^ \*\*\* AERMOD - VERSION 19191 \*\*\* \*\* I15 Roadway Emissions \*\*\*  
 01/28/23  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*  
 12:12:49

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 \*\*\* MODELOPTs: RegDFault CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 2 YEARS FOR SOURCE GROUP: ALL  
 \*\*\*  
 INCLUDING SOURCE(S): ASNLR058 , ASNLR059 , ASNLR05A , ASNLR05B ,  
 ASNLR05C , ASNLR05D , ASNLR05E , ASNLR05F , ASNLR05G , ASNLR05H , ASNLR05I , ASNLR05J ,  
 ASNLR05K , ASNLR05L , ASNLR05M , ASNLR05N , ASNLR05O , ASNLR05P , ASNLR05Q , ASNLR05R ,  
 ASNLR05S , ASNLR05T , ASNLR05U , ASNLR05V , ASNLR05W , ASNLR05X , ASNLR05Y , ASNLR05Z ,  
 . . . ,

\*\*\* NETWORK ID: ASNLR069 ; NETWORK TYPE: GRIDCART \*\*\*

\*\* CONC OF PM10 IN MICROGRAMS/M\*\*3 \*\*

Y-COORD (METERS)				X-COORD (METERS)
	453452.33	453484.16	453516.00	

3740656.80		0.01287	0.01152	0.01040
3740690.89		0.01297	0.01160	0.01046
3740724.98		0.01301	0.01164	0.01050
3740759.07		0.01298	0.01164	0.01050
3740793.16		0.01288	0.01157	0.01046
3740827.25		0.01272	0.01146	0.01038
3740861.34		0.01250	0.01130	0.01026
3740895.43		0.01223	0.01109	0.01010
3740929.52		0.01192	0.01085	0.00991
3740963.61		0.01158	0.01057	0.00969
3740997.70		0.01121	0.01027	0.00945
3741031.79		0.01084	0.00996	0.00919
3741065.88		0.01045	0.00964	0.00892
3741099.97		0.01007	0.00931	0.00864
3741134.06		0.00968	0.00898	0.00836
3741168.15		0.00930	0.00865	0.00807
3741202.24		0.00891	0.00831	0.00777
3741236.33		0.00853	0.00798	0.00748
3741270.42		0.00816	0.00766	0.00720
3741304.51		0.00780	0.00734	0.00692
3741338.60		0.00745	0.00702	0.00664

^ \*\*\* AERMOD - VERSION 19191 \*\*\* \*\* I15 Roadway Emissions \*\*\*  
 01/28/23  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*  
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 \*\*\* MODELOPTs: RegDFault CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 2 YEARS FOR SOURCE GROUP: ALL  
 \*\*\*  
 INCLUDING SOURCE(S): ASNLR058 , ASNLR059 , ASNLR05A , ASNLR05B ,  
 ASNLR05C , ASNLR05D , ASNLR05E , ASNLR05F , ASNLR05G , ASNLR05H , ASNLR05I , ASNLR05J ,



ASNLR05K ,  
 ASNLR05L , ASNLR05M , ASNLR05N , ASNLR05O , ASNLR05P , ASNLR05Q , ASNLR05R ,  
 ASNLR05S , ASNLR05T , ASNLR05U , ASNLR05V , ASNLR05W , ASNLR05X , ASNLR05Y , ASNLR05Z ,  
 . . . ,

\*\*\* SENSITIVE DISCRETE RECEPTOR POINTS \*\*\*

		** CONC OF PM10		IN MICROGRAMS/M**3				
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC			
453204.60	3741198.20	0.01735	453204.60	3741161.80	0.01881			
453215.10	3741112.80	0.02014	453221.20	3741072.10	0.02142			
453223.40	3741059.40	0.02179						

▲ \*\*\* AERMOD - VERSION 19191 \*\*\* \*\* I15 Roadway Emissions \*\*\*  
 01/28/23  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*  
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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

\*\*\* THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 2 YEARS \*\*\*

\*\* CONC OF PM10 IN MICROGRAMS/M\*\*3 \*\*

NETWORK GROUP ID GRID-ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE
ALL ASNLR069	1ST HIGHEST VALUE IS 0.12179 AT ( 452942.97, 3741134.06,	1.50, 0.00, 0.00)	GC
ASNLR069	2ND HIGHEST VALUE IS 0.12051 AT ( 452974.80, 3741065.88,	1.50, 0.00, 0.00)	GC
ASNLR069	3RD HIGHEST VALUE IS 0.11874 AT ( 453038.47, 3740827.25,	1.50, 0.00, 0.00)	GC
ASNLR069	4TH HIGHEST VALUE IS 0.11732 AT ( 453006.64, 3740997.70,	1.50, 0.00, 0.00)	GC
ASNLR069	5TH HIGHEST VALUE IS 0.11433 AT ( 452974.80, 3740963.61,	1.50, 0.00, 0.00)	GC
ASNLR069	6TH HIGHEST VALUE IS 0.11330 AT ( 453038.47, 3740929.52,	1.50, 0.00, 0.00)	GC
ASNLR069	7TH HIGHEST VALUE IS 0.11053 AT ( 452879.30, 3741168.15,	1.50, 0.00, 0.00)	GC
ASNLR069	8TH HIGHEST VALUE IS 0.11012 AT ( 452942.97, 3741031.79,	1.50, 0.00, 0.00)	GC
ASNLR069	9TH HIGHEST VALUE IS 0.10897 AT ( 453006.64, 3740929.52,	1.50, 0.00, 0.00)	GC
ASNLR069	10TH HIGHEST VALUE IS 0.10821 AT ( 453070.31, 3740861.34,	1.50, 0.00, 0.00)	GC

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

▲ \*\*\* AERMOD - VERSION 19191 \*\*\* \*\* I15 Roadway Emissions \*\*\*  
 01/28/23  
 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*  
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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

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

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

A Total of 0 Fatal Error Message(s)  
A Total of 0 Warning Message(s)  
A Total of 1916 Informational Message(s)  
  
A Total of 17544 Hours Were Processed  
  
A Total of 4 Calm Hours Identified  
  
A Total of 973 Missing Hours Identified ( 5.55 Percent)

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

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

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

Source: EMFAC2021 (v1.0.2) Emission Rates  
 Region Type: Sub-Area

Region: San Diego (SD)  
 Calendar Year: 2025  
 Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for CVMT and EVMT, g/mile for RUNEX, PMBW and PMTW, mph for Speed, kWh/mile for Energy Consumption, gallon/mile for Fuel Consumption. PHEV calculated based on total VMT.

RoadwayADT	164000	Trips/Day	
RoadwaySegmentAERMOD_VolumeSourceDistance	0.484	Miles/Trip	
SegmentVMT	79376	Miles/Day	

Region	CalYr	VehClass	Mdlyr	Speed	Fuel	VMT	%ofTotalVMT	VMT on Roadway Segment	PM10_RUNEX	Total Grams	Grams from DSL Only
Riverside (SC)	2025	HHDT	Aggregate	65	Gasoline	48.10469363	0.00161%	1.274783246	0.001381017	0.001760498	0
Riverside (SC)	2025	HHDT	Aggregate	65	Diesel	271821.8956	9.07495%	7203.330327	0.033882057	244.0636519	244.0636519
Riverside (SC)	2025	HHDT	Aggregate	65	Electricity	1663.021031	0.0552%	44.0703638	0	0	0
Riverside (SC)	2025	HHDT	Aggregate	65	Natural Gas	8057.303988	0.26900%	213.5200405	0.001932202	0.41256383	0
Riverside (SC)	2025	LDA	Aggregate	65	Gasoline	1307182.608	43.64113%	34640.58001	0.001181474	40.92695263	0
Riverside (SC)	2025	LDA	Aggregate	65	Diesel	3207.749079	0.10709%	85.00594174	0.013895104	1.181166437	1.181166437
Riverside (SC)	2025	LDA	Aggregate	65	Electricity	857.485268	0.02863%	22.72351763	0	0	0
Riverside (SC)	2025	LDA	Aggregate	65	Plug-in Hybrid	21936.81835	0.73237%	581.329729	0.001199528	0.69732103	0
Riverside (SC)	2025	LDT1	Aggregate	65	Gasoline	96215.08225	3.21220%	2549.717411	0.001950666	4.97364784	0
Riverside (SC)	2025	LDT1	Aggregate	65	Diesel	19.13079861	0.00064%	0.506969689	0.253011526	0.128269174	0.128269174
Riverside (SC)	2025	LDT1	Aggregate	65	Electricity	3.040293291	0.00010%	0.080568333	0	0	0
Riverside (SC)	2025	LDT1	Aggregate	65	Plug-in Hybrid	119.4754557	0.00399%	3.166121595	0.000836327	0.002647914	0
Riverside (SC)	2025	LDT2	Aggregate	65	Gasoline	575770.9582	19.22248%	15258.0365	0.001192922	18.20164932	0
Riverside (SC)	2025	LDT2	Aggregate	65	Diesel	1958.12918	0.06537%	51.89078412	0.004519975	0.234545024	0.234545024
Riverside (SC)	2025	LDT2	Aggregate	65	Electricity	43.59383124	0.00146%	1.155244562	0	0	0
Riverside (SC)	2025	LDT2	Aggregate	65	Plug-in Hybrid	3076.868961	0.10272%	81.5375945	0.00096444	0.078638082	0
Riverside (SC)	2025	LHDT1	Aggregate	65	Gasoline	76659.60917	2.55933%	2031.49377	0.001167503	2.371775674	0
Riverside (SC)	2025	LHDT1	Aggregate	65	Diesel	57077.70129	1.90558%	1512.569603	0.024119761	36.48281658	36.48281658
Riverside (SC)	2025	LHDT1	Aggregate	65	Electricity	1150.552957	0.03841%	30.48986539	0	0	0
Riverside (SC)	2025	LHDT2	Aggregate	65	Gasoline	10387.47273	0.34679%	275.2699415	0.001024092	0.281901681	0
Riverside (SC)	2025	LHDT2	Aggregate	65	Diesel	25982.74359	0.86745%	688.5474935	0.022015717	15.15886705	15.15886705
Riverside (SC)	2025	LHDT2	Aggregate	65	Electricity	268.2960938	0.00896%	7.109895931	0	0	0
Riverside (SC)	2025	MCY	Aggregate	65	Gasoline	8889.366937	0.29678%	235.569862	0.001793683	0.422537601	0
Riverside (SC)	2025	MDV	Aggregate	65	Gasoline	413723.0254	13.81241%	10963.73642	0.001244364	13.64288275	0
Riverside (SC)	2025	MDV	Aggregate	65	Diesel	6385.604972	0.21319%	169.2197086	0.008226206	1.392036238	1.392036238
Riverside (SC)	2025	MDV	Aggregate	65	Electricity	48.00084666	0.00160%	1.272031759	0	0	0
Riverside (SC)	2025	MDV	Aggregate	65	Plug-in Hybrid	1985.214465	0.06628%	52.60854916	0.001182611	0.062215469	0
Riverside (SC)	2025	MH	Aggregate	65	Gasoline	5104.047236	0.17040%	135.2581924	0.001050376	0.142072	0
Riverside (SC)	2025	MH	Aggregate	65	Diesel	2313.106635	0.07722%	61.29775211	0.158644979	9.724580615	9.724580615
Riverside (SC)	2025	MHDT	Aggregate	65	Gasoline	6541.207032	0.21838%	173.3431918	0.000921507	0.159736954	0
Riverside (SC)	2025	MHDT	Aggregate	65	Diesel	74887.05709	2.50015%	1984.520814	0.013346723	26.48685026	26.48685026
Riverside (SC)	2025	MHDT	Aggregate	65	Electricity	806.8497605	0.02694%	21.3816735	0	0	0
Riverside (SC)	2025	MHDT	Aggregate	65	Natural Gas	1051.119193	0.03509%	27.85485234	0.000657128	0.018304207	0
Riverside (SC)	2025	OBUS	Aggregate	65	Gasoline	2179.696262	0.07277%	57.76235264	0.000709344	0.040973379	0
Riverside (SC)	2025	OBUS	Aggregate	65	Diesel	3207.719971	0.10709%	85.00517037	0.047343653	4.024455273	4.024455273
Riverside (SC)	2025	OBUS	Aggregate	65	Electricity	24.08385788	0.00080%	0.638226672	0	0	0
Riverside (SC)	2025	OBUS	Aggregate	65	Natural Gas	398.0120176	0.01329%	10.54739181	0.000573793	0.006052022	0
Riverside (SC)	2025	SBUS	Aggregate	65	Gasoline	408.131231	0.01363%	10.81555283	0.000562456	0.006083277	0
Riverside (SC)	2025	SBUS	Aggregate	65	Diesel	240.4095703	0.08033%	6.370897919	0.043112147	0.274720426	0.274720426
Riverside (SC)	2025	SBUS	Aggregate	65	Electricity	3.465538021	0.00012%	0.091837396	0	0	0
Riverside (SC)	2025	SBUS	Aggregate	65	Natural Gas	268.770236	0.00897%	7.122460786	0.002120519	0.015103313	0
Riverside (SC)	2025	UBUS	Aggregate	65	Gasoline	1561.676556	0.05214%	41.38471654	0.000960395	0.039745663	0
Riverside (SC)	2025	UBUS	Aggregate	65	Diesel	1.704773148	0.00006%	0.045176803	0.005302537	0.000239552	0.000239552
Riverside (SC)	2025	UBUS	Aggregate	65	Electricity	1.911323813	0.00006%	0.050650433	0	0	0
Riverside (SC)	2025	UBUS	Aggregate	65	Natural Gas	1762.103058	0.05883%	46.69605578	7.68439E-05	0.003588308	0
				Total VMT		2995299.925	100.00000%	79376		Total Grams from DSL Only PM10 per Day	339.1521986
										Total Grams from DSL PM10 per Second (g/s)	0.003925373
										MERV 13 %Passing from Roadway (g/s)	0.003925373

Cancer Risk Calculations

REC: R1 (Indoor Area)						
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From AERMOD	0.01735	0.01735	0.01735	0.01735	0.01735	0.01735
Average Breathing Rate per agegroup BR/BW	225	658	535	452	210	185
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10 <sup>-6</sup> Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000375	0.00001096	0.00000891	0.00000753	0.00000350	0.00000308
Potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED (Residents live onsite for 30 years)	0.25	2	7	14	14	54
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	1
Risk for Each Age Group	1.25143E-07 0.125143071	2.92779E-06 2.92779168	2.11724E-06 2.117244096	3.57755E-06 3.577548902	5.6174E-07 0.561740256	2.61475E-06 2.614754057
Cancer Risk Per Million 30-years	7.19					

REC: R2 (Indoor Area)						
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From AERMOD	0.01881	0.01881	0.01881	0.01881	0.01881	0.01881
Average Breathing Rate per agegroup BR/BW	225	658	535	452	210	185
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	1
10 <sup>-6</sup> Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000406	0.00001188	0.00000966	0.00000816	0.00000379	0.00000348
Potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED (Residents live onsite for 30 years)	0.25	2	7	14	14	54
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	1
Risk for Each Age Group	1.35674E-07 0.135673843	3.17416E-06 3.174164928	2.29541E-06 2.295409882	3.8786E-06 3.878599127	6.09011E-07 0.609010618	2.9529E-06 2.952901286
Cancer Risk Per Million 30-years	7.80					

REC: R3 (Indoor Area)						
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From AERMOD	0.02014	0.02014	0.02014	0.02014	0.02014	0.02014
Average Breathing Rate per agegroup BR/BW	225	658	535	452	210	185
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	1
10 <sup>-6</sup> Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000435	0.00001272	0.00001034	0.00000874	0.00000406	0.00000373
Potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED (Residents live onsite for 30 years)	0.25	2	7	14	14	54
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	1
Risk for Each Age Group	1.45267E-07 0.145266943	3.3986E-06 3.398600832	2.45771E-06 2.45771159	4.15284E-06 4.15284351	6.52072E-07 0.652071974	3.16169E-06 3.161692286
Cancer Risk Per Million 30-years	8.35					

REC: R4 (Indoor Area)						
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From AERMOD	0.02142	0.02142	0.02142	0.02142	0.02142	0.02142
Average Breathing Rate per agegroup BR/BW	225	658	535	452	210	185
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	1
10 <sup>-6</sup> Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000463	0.00001353	0.00001100	0.00000929	0.00000432	0.00000396
Potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED (Residents live onsite for 30 years)	0.25	2	7	14	14	54
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	1
Risk for Each Age Group	1.54499E-07 0.1544994	3.6146E-06 3.614599296	2.61391E-06 2.613911731	4.41678E-06 4.41677953	6.93514E-07 0.693514483	3.36263E-06 3.362634
Cancer Risk Per Million 30-years	8.88					

Cancer Risk Calculations

REC: R5 (Indoor Area)						
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From AERMOD	0.02179	0.02179	0.02179	0.02179	0.02179	0.02179
Average Breathing Rate per agegroup BR/BW	225	658	535	452	210	185
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	1
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000471	0.00001376	0.00001119	0.00000946	0.00000439	0.00000403
Potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED (Residents live onsite for 30 years)	0.25	2	7	14	14	54
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	1
Risk for Each Age Group	1.57168E-07	3.67704E-06	2.65906E-06	4.49307E-06	7.05494E-07	3.42072E-06
	0.157168157	3.677036352	2.659063334	4.493071503	0.705493958	3.420718714
Cancer Risk Per Million 30-years	9.03					