Appendix B-2

Construction Health Risk Assessment

October 22, 2021

Imperial Avalon LLC
4132 Katella Avenue, #205B
Los Alamitos, California 90720
Attn: Darren Embry

Re: Imperial Avalon Mixed-Use Project - Construction Health Risk Assessment

Mr. Embry:

Per your request, Air Quality Dynamics has prepared a health risk assessment (HRA) to quantify the impact of diesel particulate matter (DPM), which is identified as a toxic air contaminant pursuant to California Code of Regulations Section 93001, associated with the generation of off-road equipment emissions during construction of the proposed project. This was done to supplement the Air Quality Assessment prepared by Michael Baker International which evaluated criteria pollutant exposures associated with project construction and operation.

The HRA quantifies both carcinogenic risks and noncarcinogenic hazards for the maximum exposed residential receptor adjoining the project site. To ensure a viable quantification of exposure, the technical approach used in the preparation of the HRA was composed of all relevant and appropriate assessment and dispersion modeling methodologies presented by the U.S. Environmental Protection Agency, California Environmental Protection Agency and South Coast Air Quality Management District (SCAQMD).

Results of the HRA showed carcinogenic risk and noncarcinogenic hazard estimates for the maximum exposed residential receptor well below significance thresholds. The following discussion outlines the methodology utilized to conduct the HRA and summarizes the protocol used to evaluate DPM exposures.

Source Identification

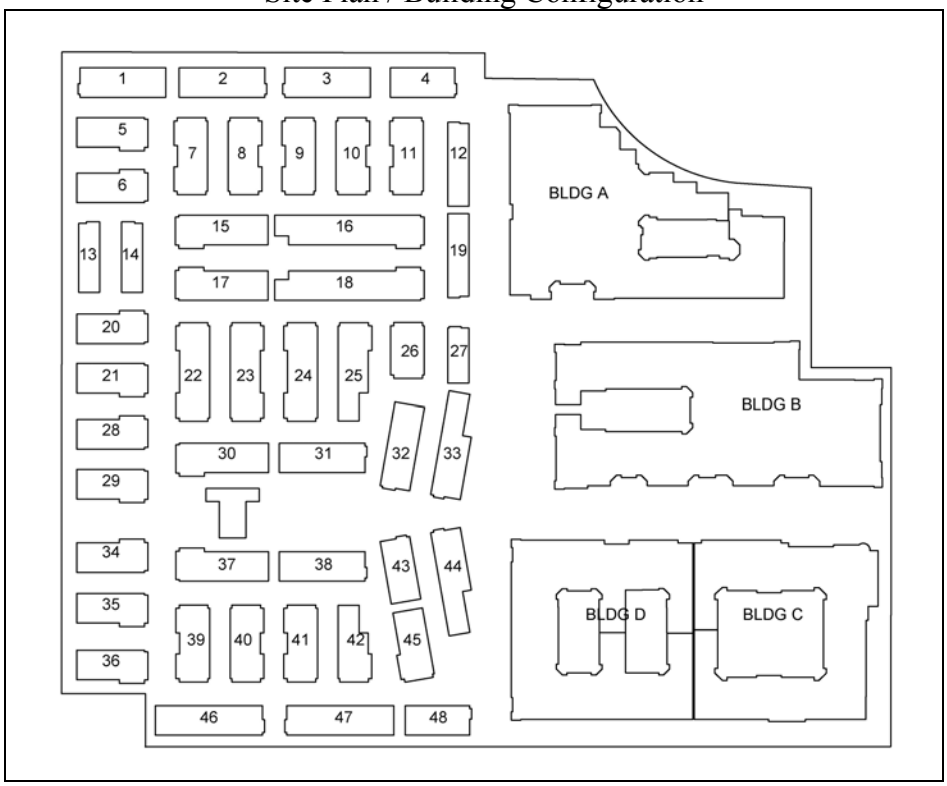
The project site is situated on 27.31 acres and currently developed as a mobile home park consisting of mobile home coaches, recreational vehicle storage, clubhouse, swimming pool, playfield, recreation building and guest parking.

Project buildout and development will incorporate the demolition of the existing mobile home park to accommodate the construction of two residential apartment buildings, two residential mixed-use buildings and 48 townhome buildings within the eastern and western portions of the project site, respectively. The various housing types are designed to form an integrated community connected by public and private open spaces, including a centrally located park, walkable paseos and courtyards. The project will also provide commercial uses and park spaces

accessible for community use. It is anticipated that the project will begin and complete construction the first quarters of 2022 and 2027, respectively. Figure 1 presents an aerial photograph of the project location and adjoining community. Figure 2 provides a graphical representation of the proposed site plan and building configuration.

Figure 1
Site Location /Vicinity Aerial Photograph

Figure 2
Site Plan / Building Configuration



Source Characterization

For on-site construction, emission estimates were based upon the Los Angeles-South Coast County profile generated by the CalEEMod land use emission software prepared by Michael Baker International. CalEEMod is an emissions model which provides a uniform platform quantifying pollutant emissions associated with project construction and operation. The model is considered a comprehensive tool for quantifying air quality impacts from projects located throughout the State prepared under the auspices of the California Environmental Quality Act (CEQA).

For this assessment, the off-road PM_{10} exhaust estimates reported by CalEEMod were used as a surrogate for DPM emissions which assumed diesel-powered construction equipment greater than 50 horsepower shall meet EPA-certified Tier 4 Interim emission standards, with the exception of grading phase construction equipment greater than 100 horsepower. During the grading phase, all off-road diesel-powered construction equipment greater than 100 horsepower (e.g., excavators, graders, dozers, and scrapers) shall meet EPA-certified Tier 4 Final (model year 2008 or newer) emission standards. In addition, all construction equipment shall be equipped with best available control technology (BACT) devices certified by the California Air Resources Board (CARB). Emission control devices shall achieve reductions that are no less than what could be achieved by a Level 4 diesel emissions control strategy for similarly sized engines as defined by CARB regulations.

To assess localized impacts, construction phase, calendar year and number of days associated with each activity were identified. Based upon the construction timelines reported in CalEEMod, individual phase activities as well as concurrent phases were identified and segregated into discrete scenarios to accommodate source location and apportionment for the identified construction related activities. Construction operations are reported to occur for 1,300 days (i.e., 3.56 years) assuming a 5 day per week operational schedule.

Table 1 outlines the scenarios, phase apportionment timelines and number of days associated with active construction operations. Table 2 provides a summary of average daily exhaust emissions associated with each identified construction scenario. The emission rates for both winter and summer scenarios were found to be commensurate. Attachment B presents the emission calculation worksheets used to quantify pollutant source strength. Excerpts from the CalEEMod output file which identify construction phase timelines and associated emission rates are provided in Attachment C.

Table 1
Construction Scenario Timelines

Scenario	Phase	Start Date	End Date	Days
1	Demolition	2/21/2022	3/4/2022	10
2	Demolition/Demolition-Crusher	3/7/2022	3/18/2022	10
3	Grading	3/21/2022	8/5/2022	100

Reference: 21207 South Avalon Boulevard - Project Description, page 12.

Table 1 continued
Construction Scenario Timelines

Scenario	Phase	Start Date	End Date	Days
4	Grading Construction (Buildings A & B)	8/8/2022	12/23/2022	100
5	Construction (Buildings A & B) Grading Paving	12/26/2022	2/10/2023	35
6	Construction (Buildings A & B) Grading Paving Paving-Crane	2/13/2023	2/17/2023	5
7	Construction (Buildings A & B)	2/20/2023	2/16/2024	260
8	Construction (Buildings C & D)	2/19/2024	8/1/2025	380
9	Construction (Townhomes)	8/4/2025	11/28/2025	85
10	Construction (Townhomes) Architectural Coating	12/1/2025	2/12/2027	315

Reference: 21207 South Avalon Boulevard - Project Description, page 12.

Table 2
Average Daily Exhaust Emissions/PM_{10}

Scenario	Phase	Emissions (Lbs/Day)
1	Demolition	0.1432
2	Demolition/Demolition-Crusher	0.1562
3	Grading	0.2938
4	Grading Construction (Buildings A & B)	0.4018
5	Construction (Buildings A & B) Grading Paving	0.4209
6	Construction (Buildings A & B) Grading Paving Paving-Crane	0.4273
7	Construction (Buildings A & B)	0.0983
8	Construction (Buildings C & D)	0.0889
9	Construction (Townhomes)	0.0850
10	Construction (Townhomes) Architectural Coating	0.0929

Exposure Quantification

In order to assess the impact of DPM emissions, air quality modeling utilizing the AMS/EPA Regulatory Model AERMOD was performed. AERMOD is a steady-state Gaussian plume model applicable to directly emitted air pollutants that employs best state-of-practice parameterizations for characterizing meteorological influences and atmospheric dispersion. AERMOD is the U.S. Environmental Protection Agency's guideline model for the assessment of near-field pollutant dispersion.

The SCAQMD provides guidance (*Localized Significance Threshold Methodology*, July 2008) on the evaluation of localized air quality impacts to public agencies conducting environmental review of projects located within its jurisdiction. As such, source treatment outlined in the Localized Significance Threshold (LST) methodology was utilized whereby exhaust emissions from construction equipment were treated as a set of side-by-side elevated volume sources with a release height of five and an initial vertical (sigma z) dimension of 1.4 meters. The elevated source characterization accounts for a mid-range plume rise height associated with exhaust stack emissions for typical off-road equipment inventories. Horizontal (sigma y) parameters were produced by dividing source separation distances by a standard deviation of 2.15. Residential receptors were placed immediately west and south of the project site and assigned flagpole heights of two meters. Graphical representations of the source and receptor grid networks are presented in Figures 3 through 5.

Figure 3
Area-Wide Emission Sources

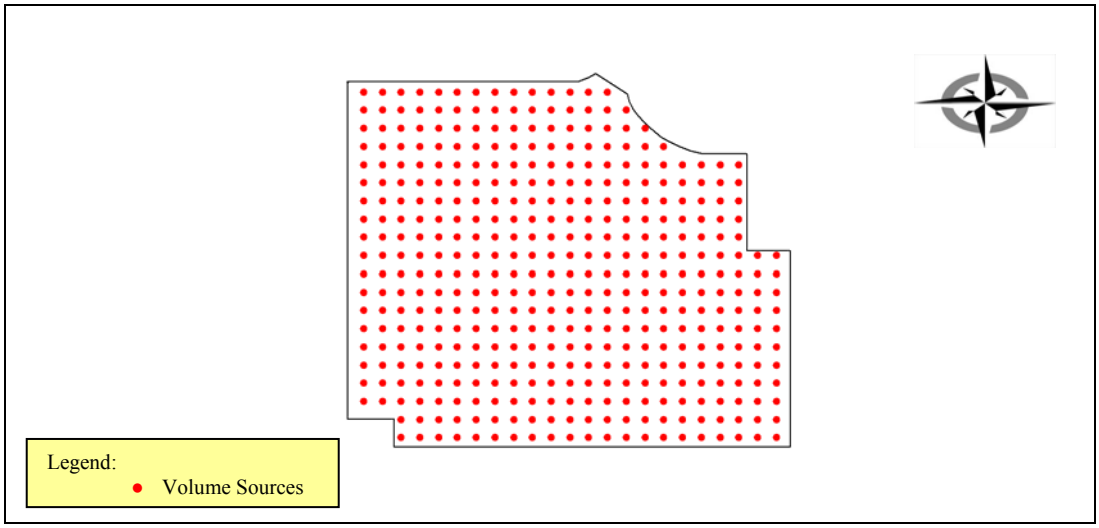


Figure 4
Building Emission Sources

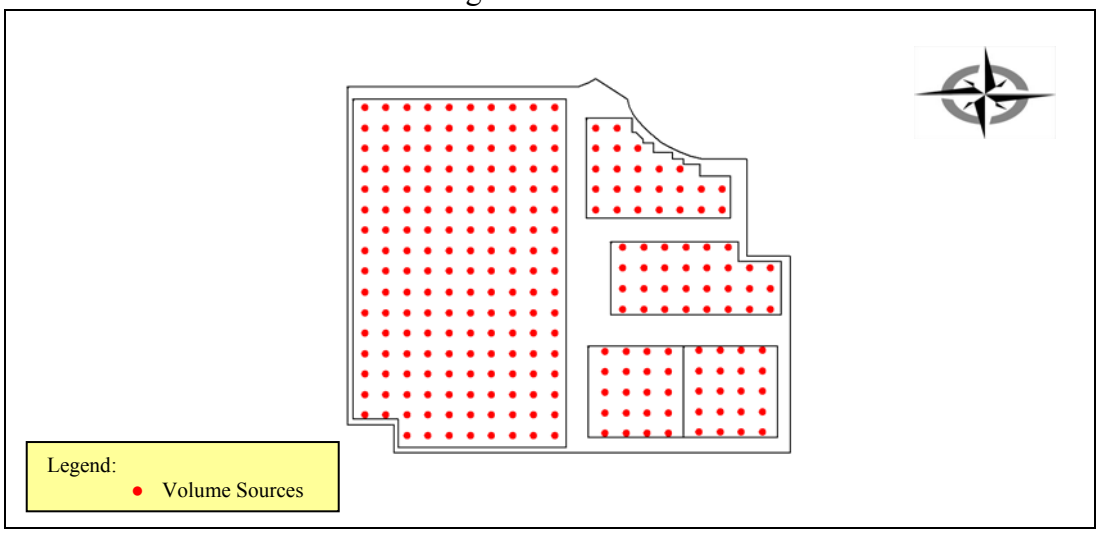
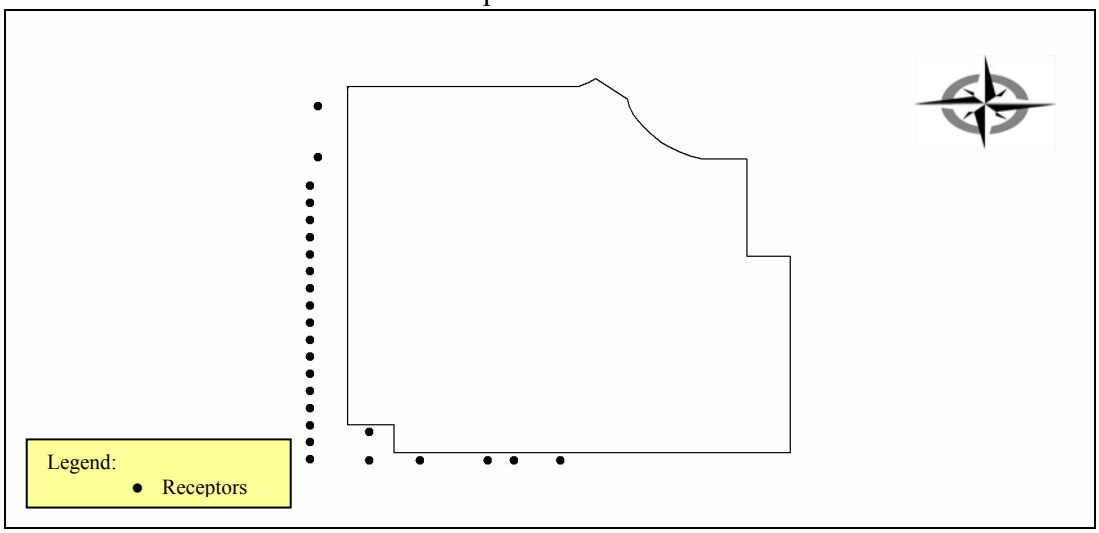


Figure 5
Receptor Locations



Refined air dispersion models require meteorological information to account for local atmospheric conditions. Due to their sensitivity to individual meteorological parameters such as wind speed and direction, the U.S. Environmental Protection Agency recommends that meteorological data used as input into dispersion models be selected on the basis of relative spatial and temporal conditions that exist in the area of concern. In response to this recommendation, meteorological data from the SCAQMD Long Beach Airport (Source Receptor Area 4) monitoring station which is located 7.1 miles southeast of the project site was used to represent local weather conditions and prevailing winds. In a manner consistent with SCAQMD guidance for the assessment of chronic exposures, maximum concentrations were produced by incorporating all five years of available data. A model scalar value of 1 was assigned to account for emissions generated during construction related activity corresponding to 8 hours per day as reported in the CalEEMod construction profile from 8 a.m. to 4 p.m. (ending hours 9 to 16). A scalar value of 0 was used for non-operational hours.

A copy of the AERMOD dispersion model output summary files associated with each construction scenario are provided in Attachment D.

Risk Characterization

Carcinogenic compounds are not considered to have threshold levels (i.e., dose levels below which there are no risks). Any exposure, therefore, will have some associated risk. As a result, the State of California has established a threshold of one in one hundred thousand (1.0E-05) as a level posing no significant risk for exposures to carcinogens regulated under the Safe Drinking Water and Toxic Enforcement Act (Proposition 65). This threshold is also consistent with the maximum incremental cancer risk established by the SCAQMD for projects prepared under the California Environmental Quality Act (CEQA).

Health risks associated with exposure to carcinogenic compounds can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration.

Under a deterministic approach (i.e., point estimate methodology), the cancer risk probability is determined by multiplying the chemical's annual concentration by its unit risk factor (URF). The URF is a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation pathway. It represents an upper bound estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter ($\mu g/m^3$) over a 70 year lifetime. The URF and corresponding cancer potency factor for DPM utilized in the assessment was obtained from the *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values*.

A review of available guidance was conducted to determine applicability of the use of early life exposure adjustments to identified carcinogens. For risk assessments conducted under the auspices of The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly, Statutes of 1987; Health and Safety Code Section 44300 et seq.) a weighting factor is applied to all carcinogens regardless of purported mechanism of action. Notwithstanding, applicability of AB 2588 is limited to commercial and industrial operations. There are two broad classes of facilities subject to the AB 2588 Program: Core facilities and facilities identified within discrete industry-wide source categories. Core facilities subject to AB 2588 compliance are sources whose criteria pollutant emissions (particulate matter, oxides of sulfur, oxides of nitrogen and volatile organic compounds) are 25 tons per year or more as well as those facilities whose criteria pollutant emissions are 10 tons per year or more but less than 25 tons per year. Industry-wide source facilities are classified as smaller operations with relatively similar emission profiles (e.g., auto body shops, gas stations and dry cleaners using perchloroethylene). The off-road mobile source emissions generated from the construction of the proposed project are not classified as core operations nor subject to industry-wide source evaluation.

As such, the HRA relied upon U.S. Environmental Protection Agency guidance relating to the use of early life exposure adjustment factors (*Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens*, EPA/630/R-003F) whereby adjustment factors are only considered when carcinogens act "through the mutagenic mode of action." In 2006, the U.S. Environmental Protection Agency published a memorandum which provides guidance regarding the preparation of health risk assessments should carcinogenic compounds elicit a mutagenic mode of action (USEPA, 2006). As presented in the technical memorandum, numerous compounds were identified as having a mutagenic mode of action. For diesel particulates, polycyclic aromatic hydrocarbons (PAHs) and their derivatives, which are known to exhibit a mutagenic mode of action, comprise < 1% of the exhaust particulate mass. To date, the U.S. Environmental Protection Agency reports that whole diesel engine exhaust has not been shown to elicit a mutagenic mode of action (USEPA, 2018).

As a commenting agency, the SCAQMD has not provided guidance nor developed policy relating to the applicability of applying early life exposure adjustment factors for projects prepared by other public/lead agencies subject to CEQA. Additionally, the California Department of Toxic Substances Control (DTSC) which is charged with protecting individuals and the environment from the effects of toxic substances is also responsible for assessing, investigating and evaluating sensitive receptor populations to ensure that properties are free of

contamination or that health protective remediation levels are achieved has adopted the U.S. Environmental Protection Agency's policy in the application of early life exposure adjustments. As such, incorporation of early life exposure adjustments for exposures to DPM emissions in the quantification of carcinogenic risk for construction of the proposed project were not considered in the HRA.

To effectively quantify dose, the procedure requires the incorporation of several discrete exposure variates. To account for upper-bound exposures associated with residential occupancies, lifetime risk values were adjusted to account for an exposure frequency of 350 days per year for a period of 3.56 years (i.e., 0.25 years for the third trimester, 2.0 years for ages 0 to 2 years and 1.31 years for the 2 to 9 year age group).

In addition, the dispersion model concentrations predicted for each scenario were aligned with each age group and adjusted to produce a weighted average concentration commensurate with reported construction activity timelines. A copy of the dispersion model concentration worksheet is provided in Attachment B.

Point estimates for daily breathing rates representing the 95th percentile of 361, 1090 and 861 L/kg-day for the identified age groups were utilized and incorporated into the following dose algorithm.

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

Where:

$Dose_{air}$	=	*dose through inhalation (mg/kg/day)*
C_{air}	=	*concentration of contaminant in air ($\mu g/m^3$)*
$\{BR/BW\}$	=	*daily breathing rate normalized to body weight (L/kg body weight/day)*
A	=	*inhalation absorption factor (unitless)*
EF	=	*exposure frequency (days/365 days)*
10^{-6}	=	*micrograms to milligrams conversion*

Inhalation dose values for the identified age groups were incorporated into the following equation to produce carcinogenic risk estimates for residential occupancies commensurate with the duration of construction activity:

$$Risk_{inh} = Dose_{air} \times CPF \times ED/AT \times FAH$$

Where:

$Risk_{inh}$	=	*inhalation cancer risk*
$Dose_{air}$	=	*daily inhalation dose (mg/kg/day)*
CPF	=	*inhalation cancer potency factor ($mg/kg/day^{-1}$)*
ED	=	*exposure duration for specified age group (years)*
AT	=	*averaging time (years)*
FAH	=	*fraction of exposure time (default 1)*

Table 3 presents the carcinogenic risk estimate for the maximum exposed residential receptor. Attachment A, Tables A1 through A3, column b identify the adjusted DPM concentration, columns f-h, present the URF, corresponding cancer potency factor and dose for each exposure scenario. The cancer risk estimate is presented in column i.

Table 3
Carcinogenic Risk / Maximum Exposed Residential Receptor

Age Group	Risk
Third Trimester	2.2E-08
0 to 2 years	2.6E-07
2 to 9 years	1.0E-07
Total	**3.9E-07**

Note: 3.9E-07 denotes an excess case of cancer of 0.039 in one hundred thousand (100,000) individuals exposed.

As noted above, the cancer risk for the maximum exposed residential receptor was predicted to be below the significance threshold of one in one hundred thousand (1.0E-05).

An evaluation of the potential noncancer effects of DPM exposure was also conducted. Under the point estimate approach, adverse health effects are evaluated by comparing the pollutant concentration with the appropriate Reference Exposure Level (REL). The chronic REL presented in the *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values* was considered in the assessment. There are no available acute/8-hour reference exposure levels for DPM.

To quantify noncarcinogenic impacts, the hazard index approach was used. The hazard index assumes that subthreshold exposures adversely affect a specific organ or organ system (i.e., toxicological endpoint). To calculate the hazard index, the pollutant concentration or dose is divided by its toxicity value. Should the total equal or exceed one (i.e., unity), a health hazard is presumed to exist. No exposure frequency or duration adjustments are considered for noncarcinogenic exposures.

For chronic noncarcinogenic effects, the hazard index for the respiratory endpoint totaled less than one for the maximum exposed residential receptor.

Table 4 presents the hazard index value for the maximum exposed residential receptor. Attachment A, Tables A1 through A3, column j presents the REL used in the evaluation of chronic noncarcinogenic exposure. The noncancer hazard index generated from off-road equipment activity is presented in column k.

Table 4
Noncarcinogenic Hazard / Maximum Exposed Residential Receptor

Age Group	Hazard
Third Trimester	3.5E-03
0 to 2 years	1.7E-03
2 to 9 years	1.3E-03
Total	**6.4E-03**

Note: 6.4E-03 is commensurate with a numeric value of 0.0064.

Conclusion

Based upon the predicted carcinogenic risk and noncarcinogenic hazard estimates for the residential exposure scenario, the HRA demonstrates that construction of the proposed project will not result in unacceptable localized impacts.

I can be reached at (818) 703-3294 should you have any questions or require additional information.

Sincerely,

Bill Piazza

Attachment A: Carcinogenic Risk/Noncarcinogenic Hazard Calculation Worksheets
Attachment B: Calculation Worksheets
Attachment C: CalEEMod Output File
Attachment D: Dispersion Model Output Summary Files
Attachment E: List of References

ATTACHMENT A

Carcinogenic Risk/Noncarcinogenic Hazard Calculation Worksheets

Table A1
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
Third Trimester Exposure / Maximum Receptor Location

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards / Toxicological Endpoints*								
					URF	CPF	DOSE	RISK	REL	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)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
On-Site Exhaust	0.01732	1.73E-05	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	6.0E-06	2.2E-08	5.0E+00	3.5E-03							
TOTAL								2.2E-08		3.5E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

* Key to Toxicological Endpoint

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 effect
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	1
breathing rate third trimester	361
breathing rate 0-2	1090
breathing rate 2-9	861

Table A2
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
0 to 2 Year Exposure / Maximum Receptor Location

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards / Toxicological Endpoints*								
					URF	CPF	DOSE	RISK	REL	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)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
On-Site Exhaust	0.00835	8.35E-06	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	8.7E-06	2.6E-07	5.0E+00	1.7E-03							
TOTAL								2.6E-07		1.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

* Key to Toxicological Endpoint

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 effect
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	2.0
inhalation rate (L/kg-day))	1090
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	1
breathing rate third trimester	361
breathing rate 0-2	1090
breathing rate 2-9	861

Table A3
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
2 to 9 Year Exposure / Maximum Receptor Location

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards / Toxicological Endpoints*								
					URF	CPF	DOSE	RISK	REL	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)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
On-Site Exhaust	0.00637	6.37E-06	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	5.3E-06	1.0E-07	5.0E+00	1.3E-03							
TOTAL								1.0E-07		1.3E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

* Key to Toxicological Endpoint

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 effect
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	1.31
inhalation rate (L/kg-day))	861
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	1
breathing rate third trimester	361
breathing rate 0-2	1090
breathing rate 2-9	861

ATTACHMENT B

Calculation Worksheets

Scenario 1

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site Exhaust PM 10	Demolition	2022	0.1432	10	1.432
				10	1.432
	Average Daily Construction (Lb/Day)				0.1432
Exhaust PM10	Demolition			Combustion mass	Combustion g/s/source
	Combustion Sources	416		0.1432	5.4215E-06

Scenario 2

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site Exhaust PM 10	Demolition	2022	0.1432	10	1.432
				10	1.432
	Average Daily Construction (Lb/Day)				0.1432
On-Site Exhaust PM 10	Demolition-Crusher	2022	9.35E-03	10	0.094
				10	0.094
	Average Daily Construction (Lb/Day)				0.0094
	Total (Lb/Day)				0.1526
Exhaust PM10	Demolition/Demolition-Crusher			Combustion mass	Combustion g/s/source
	Combustion Sources	416		0.1526	5.7755E-06

Scenario 3

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site Exhaust PM 10	Grading	2022	0.2938	100	29.380
				100	29.380
	Average Daily Construction (Lb/Day)				0.2938
Exhaust PM10	Grading			Combustion mass	Combustion g/s/source
	Combustion Sources	416		0.2938	1.1123E-05

Scenario 4

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site Exhaust PM 10	Grading	2022	0.2938	100	29.380
				100	29.380
	Average Daily Construction (Lb/Day)				0.2938
On-Site Exhaust PM 10	Construction	2022	0.1080	100	10.800
				100	10.800
	Average Daily Construction (Lb/Day)				0.1080
Exhaust PM10	Grading			Combustion mass	Combustion g/s/source
	Combustion Sources	363		0.2938	1.2747E-05
Exhaust PM10	Construction			Combustion mass	Combustion g/s/source
	Combustion Sources	54		0.1080	3.1499E-05

Scenario 5

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site	Construction	2022	0.1080	5	0.540
Exhaust PM 10	Construction	2023	0.0993	30	2.979
				35	3.519
	Average Daily Construction (Lb/Day)				0.1005

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site	Grading	2022	0.2938	5	1.469
Exhaust PM 10	Grading	2023	0.2811	30	8.433
				35	9.902
	Average Daily Construction (Lb/Day)				0.2829
On-Site	Paving	2022	0.0374	5	0.187
Exhaust PM 10	Paving	2023	0.0374	30	1.122
				35	1.309
	Average Daily Construction (Lb/Day)				0.0374
	Total (Lb/Day)				0.3203

Exhaust PM10	Construction		Combustion mass	Combustion g/s/source
	Combustion Sources	54	0.1005	2.9324E-05
Exhaust PM10	Grading/Paving		Combustion mass	Combustion g/s/source
	Combustion Sources	363	0.3203	1.3898E-05

Scenario 6

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site Exhaust PM 10	Construction	2023	0.0993	5	0.497
				5	0.497
	Average Daily Construction (Lb/Day)				0.0993

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site Exhaust PM 10	Grading	2023	0.2811	5	1.406
				5	1.406
	Average Daily Construction (Lb/Day)				0.2811
On-Site Exhaust PM 10	Paving	2023	0.0374	5	0.187
				5	0.187
	Average Daily Construction (Lb/Day)				0.0374
On-Site Exhaust PM 10	Paving-Crane	2023	9.45E-03	5	0.047
				5	0.047
	Average Daily Construction (Lb/Day)				0.0095
	Total (Lb/Day)				0.3280

Exhaust PM10	Construction		Combustion mass	Combustion g/s/source
	Combustion Sources	54	0.0993	2.8962E-05
Exhaust PM10	Grading/Paving/Paving-Crane		Combustion mass	Combustion g/s/source
	Combustion Sources	363	0.3280	1.4229E-05

Scenario 7

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site	Construction	2023	0.0993	225	22.343
Exhaust PM 10	Construction	2024	0.0916	35	3.206
				260	25.549
	Average Daily Construction (Lb/Day)				0.0983

			Combustion mass	Combustion g/s/source
Exhaust PM10	Construction			
	Combustion Sources	54	0.0983	2.8660E-05

Scenario 8

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site	Construction	2024	0.0916	227	20.793
Exhaust PM 10	Construction	2025	0.0850	153	13.005
				380	33.798
	Average Daily Construction (Lb/Day)				0.0889

			Combustion mass	Combustion g/s/source
Exhaust PM10	Construction			
	Combustion Sources	40	0.0889	3.5020E-05

Scenario 9

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site	Construction	2025	0.0850	85	7.225
Exhaust PM 10					
				85	7.225
	Average Daily Construction (Lb/Day)				0.0850

			Combustion mass	Combustion g/s/source
Exhaust PM10	Construction			
	Combustion Sources	168	0.0850	7.9686E-06

Scenario 10

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site	Construction	2025	0.0850	23	1.955
Exhaust PM 10	Construction	2026	0.0850	261	22.185
	Construction	2027	0.0850	31	2.635
				315	26.775
	Average Daily Construction (Lb/Day)				0.0850
On-Site	Architectural Coating	2025	7.92E-03	23	0.182
Exhaust PM 10	Architectural Coating	2026	7.92E-03	261	2.067
	Architectural Coating	2027	7.92E-03	31	0.246
				315	2.495
	Average Daily Construction (Lb/Day)				0.0079

Exhaust PM10	Construction		Combustion mass	Combustion g/s/source
	Combustion Sources	168	0.0850	7.9686E-06
Exhaust PM10	Architectural Coating		Combustion mass	Combustion g/s/source
	Combustion Sources	262	0.0079	4.7610E-07

Modeled Concentrations Adjusted by Age Group

Age	Scenario	Days	Years	Wt Fraction	Modeled Conc.	Adjusted Conc.
3rd timester	1	10	0.027	0.110	0.00948	0.00104
	2	10	0.027	0.110	0.01010	0.00111
	3	71	0.195	0.780	0.01944	0.01517
		91	0.25	1.000		0.01732
0 to 2	3	29	0.079	0.040	0.01944	0.00077
	4	100	0.274	0.137	0.02314	0.00317
	5	35	0.096	0.048	0.02501	0.00120
	6	5	0.014	0.007	0.02556	0.00018
	7	260	0.712	0.356	0.00123	0.00044
	8	301	0.825	0.412	0.00629	0.00259
		730	2.00	1.000		0.00835
2 to 9	8	79	0.216	0.165	0.00629	0.00104
	9	85	0.233	0.177	0.00602	0.00107
	10	315	0.863	0.658	0.00649	0.00427
		479	1.31	1.000		0.00637

ATTACHMENT C

CalEEMod Output File

Imperial Avalon - Los Angeles-South Coast County, Winter

Imperial Avalon

Los Angeles-South Coast County, Winter

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/21/2022	3/18/2022	5	20	
2	Demolition (Crusher Use)	Demolition	3/7/2022	3/18/2022	5	10	
3	Grading	Grading	3/21/2022	2/17/2023	5	240	
4	Grading (Sheet Piling)	Grading	11/26/2022	2/17/2023	5	60	
5	Building Construction	Building Construction	8/8/2022	2/12/2027	5	1180	
6	Building Construction (Pile Rig Use)	Building Construction	2/11/2027	2/12/2027	5	2	
7	Paving	Paving	12/26/2022	2/17/2023	5	40	
8	Paving (Crane Use)	Paving	2/13/2023	2/17/2023	5	5	
9	Architectural Coating	Architectural Coating	12/1/2025	2/12/2027	5	315	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1200

Acres of Paving: 18.76

Residential Indoor: 3,093,580; Residential Outdoor: 1,031,193; Non-Residential Indoor: 43,152; Non-Residential Outdoor: 14,384; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38

Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Sweepers/Scrubbers	1	8.00	64	0.46
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	6.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Grading	Forklifts	1	6.00	89	0.20
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	4	8.00	367	0.48
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Concrete/Industrial Saws	1	6.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	2	6.00	78	0.48
Demolition (Crusher Use)	Crushing/Proc. Equipment	1	8.00	85	0.78
Grading	Plate Compactors	0		8	0.43
Grading (Sheet Piling)	Other Construction Equipment	1	8.00	630	0.50
Building Construction (Pile Rig Use)	Other Construction Equipment	1	8.00	630	0.50
Paving (Crane Use)	Cranes	1	8.00	231	0.29
Demolition (Crusher Use)	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction (Pile Rig Use)	Cranes	0	7.00	231	0.29
Demolition (Crusher Use)	Excavators	0	8.00	158	0.38

Grading (Sheet Piling)	Excavators	0	8.00	158	0.38
Building Construction (Pile Rig Use)	Forklifts	0	8.00	89	0.20
Building Construction (Pile Rig Use)	Generator Sets	0	8.00	84	0.74
Grading (Sheet Piling)	Graders	0	8.00	187	0.41
Paving (Crane Use)	Pavers	0	8.00	130	0.42
Paving (Crane Use)	Paving Equipment	0	8.00	132	0.36
Paving (Crane Use)	Rollers	0	8.00	80	0.38
Demolition (Crusher Use)	Rubber Tired Dozers	0	8.00	247	0.40
Grading (Sheet Piling)	Rubber Tired Dozers	0	8.00	247	0.40
Grading (Sheet Piling)	Scrapers	0	8.00	367	0.48
Building Construction (Pile Rig Use)	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading (Sheet Piling)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction (Pile Rig Use)	Welders	0	8.00	46	0.45

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8773	0.0000	5.8773	0.8899	0.0000	0.8899			0.0000			0.0000
Off-Road	0.8193	13.2323	24.9869	0.0389		0.1432	0.1432		0.1360	0.1360	0.0000	3,736.2983	3,736.2983	0.7928		3,756.1172
Total	**0.8193**	**13.2323**	**24.9869**	**0.0389**	**5.8773**	**0.1432**	**6.0205**	**0.8899**	**0.1360**	**1.0259**	**0.0000**	**3,736.2983**	**3,736.2983**	**0.7928**		**3,756.1172**

3.3 Demolition (Crusher Use) - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1286	2.5024	4.3265	7.0200e-003		9.3500e-003	9.3500e-003		9.3500e-003	9.3500e-003	0.0000	664.5301	664.5301	0.0433		665.6118
Total	**0.1286**	**2.5024**	**4.3265**	**7.0200e-003**		**9.3500e-003**	**9.3500e-003**		**9.3500e-003**	**9.3500e-003**	**0.0000**	**664.5301**	**664.5301**	**0.0433**		**665.6118**

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.2167	0.0000	4.2167	1.4417	0.0000	1.4417			0.0000			0.0000
Off-Road	1.7658	16.5485	59.5426	0.1127		0.2938	0.2938		0.2843	0.2843	0.0000	10,903.1829	10,903.1829	3.4068		10,988.3529
Total	**1.7658**	**16.5485**	**59.5426**	**0.1127**	**4.2167**	**0.2938**	**4.5105**	**1.4417**	**0.2843**	**1.7260**	**0.0000**	**10,903.1829**	**10,903.1829**	**3.4068**		**10,988.3529**

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.2167	0.0000	4.2167	1.4417	0.0000	1.4417			0.0000			0.0000
Off-Road	1.7508	16.3447	59.5452	0.1127		0.2811	0.2811		0.2726	0.2726	0.0000	10,902.5046	10,902.5046	3.4042		10,987.6104
Total	**1.7508**	**16.3447**	**59.5452**	**0.1127**	**4.2167**	**0.2811**	**4.4978**	**1.4417**	**0.2726**	**1.7143**	**0.0000**	**10,902.5046**	**10,902.5046**	**3.4042**		**10,987.6104**

3.5 Grading (Sheet Piling) - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 Grading (Sheet Piling) - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.6 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8525	12.3878	20.9667	0.0316		0.1080	0.1080		0.1080	0.1080	0.0000	2,998.8321	2,998.8321	0.6362		3,014.7369
Total	**0.8525**	**12.3878**	**20.9667**	**0.0316**		**0.1080**	**0.1080**		**0.1080**	**0.1080**	**0.0000**	**2,998.8321**	**2,998.8321**	**0.6362**		**3,014.7369**

3.6 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8302	12.3454	20.9488	0.0316		0.0993	0.0993		0.0993	0.0993	0.0000	2,999.7092	2,999.7092	0.6298		3,015.4528
Total	**0.8302**	**12.3454**	**20.9488**	**0.0316**		**0.0993**	**0.0993**		**0.0993**	**0.0993**	**0.0000**	**2,999.7092**	**2,999.7092**	**0.6298**		**3,015.4528**

3.6 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8116	12.3056	20.9346	0.0316		0.0916	0.0916		0.0916	0.0916	0.0000	3,000.1974	3,000.1974	0.6255		3,015.8341
Total	**0.8116**	**12.3056**	**20.9346**	**0.0316**		**0.0916**	**0.0916**		**0.0916**	**0.0916**	**0.0000**	**3,000.1974**	**3,000.1974**	**0.6255**		**3,015.8341**

3.6 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7955	12.2669	20.9226	0.0317		0.0850	0.0850		0.0850	0.0850	0.0000	3,000.9736	3,000.9736	0.6205		3,016.4862
Total	**0.7955**	**12.2669**	**20.9226**	**0.0317**		**0.0850**	**0.0850**		**0.0850**	**0.0850**	**0.0000**	**3,000.9736**	**3,000.9736**	**0.6205**		**3,016.4862**

3.6 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7955	12.2669	20.9226	0.0317		0.0850	0.0850		0.0850	0.0850	0.0000	3,000.9736	3,000.9736	0.6205		3,016.4862
Total	**0.7955**	**12.2669**	**20.9226**	**0.0317**		**0.0850**	**0.0850**		**0.0850**	**0.0850**	**0.0000**	**3,000.9736**	**3,000.9736**	**0.6205**		**3,016.4862**

3.6 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7955	12.2669	20.9226	0.0317		0.0850	0.0850		0.0850	0.0850	0.0000	3,000.9736	3,000.9736	0.6205		3,016.4862
Total	**0.7955**	**12.2669**	**20.9226**	**0.0317**		**0.0850**	**0.0850**		**0.0850**	**0.0850**	**0.0000**	**3,000.9736**	**3,000.9736**	**0.6205**		**3,016.4862**

3.7 Building Construction (Pile Rig Use) - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.8 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3341	10.0395	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.5168					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8509**	**10.0395**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.8 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3341	10.0395	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.5168					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8509**	**10.0395**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.9 Paving (Crane Use) - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0945	1.5241	3.0719	5.7700e-003		9.4500e-003	9.4500e-003		9.4500e-003	9.4500e-003	0.0000	558.8192	558.8192	0.1807		563.3376
Paving	4.1344					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.2289**	**1.5241**	**3.0719**	**5.7700e-003**		**9.4500e-003**	**9.4500e-003**		**9.4500e-003**	**9.4500e-003**	**0.0000**	**558.8192**	**558.8192**	**0.1807**		**563.3376**

3.10 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.9236					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1090	2.1197	3.6648	5.9400e-003		7.9200e-003	7.9200e-003		7.9200e-003	7.9200e-003	0.0000	562.8961	562.8961	0.0307		563.6637
Total	**32.0325**	**2.1197**	**3.6648**	**5.9400e-003**		**7.9200e-003**	**7.9200e-003**		**7.9200e-003**	**7.9200e-003**	**0.0000**	**562.8961**	**562.8961**	**0.0307**		**563.6637**

3.10 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.9236					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1090	2.1197	3.6648	5.9400e-003		7.9200e-003	7.9200e-003		7.9200e-003	7.9200e-003	0.0000	562.8961	562.8961	0.0307		563.6637
Total	**32.0325**	**2.1197**	**3.6648**	**5.9400e-003**		**7.9200e-003**	**7.9200e-003**		**7.9200e-003**	**7.9200e-003**	**0.0000**	**562.8961**	**562.8961**	**0.0307**		**563.6637**

3.10 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.9236					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1090	2.1197	3.6648	5.9400e-003		7.9200e-003	7.9200e-003		7.9200e-003	7.9200e-003	0.0000	562.8961	562.8961	0.0307		563.6637
Total	**32.0325**	**2.1197**	**3.6648**	**5.9400e-003**		**7.9200e-003**	**7.9200e-003**		**7.9200e-003**	**7.9200e-003**	**0.0000**	**562.8961**	**562.8961**	**0.0307**		**563.6637**

ATTACHMENT D

Dispersion Model Output Summary Files

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

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

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

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO 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   416 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   9818605.0 ; Urban Roughness Length = 1.000 m

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

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

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 416 Source(s);   1 Source Group(s); and   25 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 416 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) =   10.00 ; 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 =   3.8 MB of RAM.

```
**Input Runstream File:          F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_1A_2012-2016_OTHER.DTA
**Output Print File:             F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_1A_2012-2016_OTHER.LST

**File for Summary of Results:   F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_1A_2012-2016_OTHER.SUM
```


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

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

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

```
  Surface file:   F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.SFC         Met Version:  16216
  Profile file:   F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:    23129                  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	-5.3	0.094	-9.000	-9.000	-999.	70.	14.3	0.10	2.68	1.00	1.13	322.	7.9	282.0	2.0
12	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	281.4	2.0
12	01	01	1	03	-2.5	0.068	-9.000	-9.000	-999.	43.	11.4	0.10	2.68	1.00	0.74	79.	7.9	280.9	2.0
12	01	01	1	04	-3.2	0.075	-9.000	-9.000	-999.	49.	11.7	0.10	2.68	1.00	0.86	137.	7.9	280.9	2.0
12	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	280.4	2.0
12	01	01	1	06	-5.2	0.093	-9.000	-9.000	-999.	68.	14.0	0.10	2.68	1.00	1.11	92.	7.9	279.9	2.0
12	01	01	1	07	-2.3	0.066	-9.000	-9.000	-999.	41.	11.5	0.10	2.68	1.00	0.69	67.	7.9	278.8	2.0
12	01	01	1	08	-1.7	0.060	-9.000	-9.000	-999.	36.	11.4	0.10	2.68	0.54	0.65	91.	7.9	279.9	2.0
12	01	01	1	09	36.2	-9.000	-9.000	-9.000	37.	-999.	-99999.0	0.10	2.68	0.31	0.00	0.	7.9	283.8	2.0
12	01	01	1	10	108.4	0.139	0.707	0.009	119.	124.	-2.3	0.10	2.68	0.24	0.92	319.	7.9	287.5	2.0
12	01	01	1	11	160.5	0.114	1.137	0.005	334.	93.	-1.0	0.10	2.68	0.21	0.62	23.	7.9	292.5	2.0
12	01	01	1	12	186.7	0.125	1.473	0.005	623.	105.	-1.0	0.10	2.68	0.20	0.69	18.	7.9	295.4	2.0
12	01	01	1	13	186.8	0.130	1.761	0.005	1065.	112.	-1.1	0.10	2.68	0.20	0.74	250.	7.9	297.5	2.0
12	01	01	1	14	161.7	0.150	1.834	0.005	1387.	139.	-1.9	0.10	2.68	0.21	0.96	347.	7.9	300.4	2.0
12	01	01	1	15	105.5	0.243	1.633	0.005	1499.	288.	-12.4	0.10	2.68	0.24	2.11	194.	7.9	295.9	2.0
12	01	01	1	16	32.4	0.211	1.109	0.005	1530.	233.	-26.3	0.10	2.68	0.33	1.98	186.	7.9	295.4	2.0
12	01	01	1	17	-20.5	0.250	-9.000	-9.000	-999.	300.	69.2	0.10	2.68	0.60	2.81	293.	7.9	291.4	2.0
12	01	01	1	18	-25.4	0.257	-9.000	-9.000	-999.	313.	72.8	0.10	2.68	1.00	2.90	301.	7.9	288.1	2.0
12	01	01	1	19	-21.0	0.211	-9.000	-9.000	-999.	233.	49.0	0.10	2.68	1.00	2.40	313.	7.9	286.4	2.0
12	01	01	1	20	-25.7	0.258	-9.000	-9.000	-999.	315.	73.3	0.10	2.68	1.00	2.91	302.	7.9	286.4	2.0
12	01	01	1	21	-22.5	0.225	-9.000	-9.000	-999.	256.	55.7	0.10	2.68	1.00	2.55	306.	7.9	285.4	2.0

```
 12 01 01   1 22   -9.3  0.126 -9.000 -9.000 -999.  111.     19.5  0.10   2.68   1.00    1.48  284.    7.9  285.9    2.0
 12 01 01   1 23  -21.4  0.214 -9.000 -9.000 -999.  237.     50.3  0.10   2.68   1.00    2.43  282.    7.9  285.4    2.0
 12 01 01   1 24  -30.1  0.300 -9.000 -9.000 -999.  394.     98.9  0.10   2.68   1.00    3.36  300.    7.9  284.2    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  322.    1.13   282.1   99.0  -99.00  -99.00

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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 1                                      ***        14:48:41
                                                                                                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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


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

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

ALL       1ST HIGHEST VALUE IS       0.00948 AT (  382862.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          2ND HIGHEST VALUE IS       0.00844 AT (  382822.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          3RD HIGHEST VALUE IS       0.00815 AT (  382800.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          4TH HIGHEST VALUE IS       0.00602 AT (  382742.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          5TH HIGHEST VALUE IS       0.00570 AT (  382699.00,  3744742.00,     7.00,     7.00,    2.00)  DC
          6TH HIGHEST VALUE IS       0.00473 AT (  382655.00,  3744983.00,     7.00,     7.00,    2.00)  DC
          7TH HIGHEST VALUE IS       0.00426 AT (  382648.00,  3744928.00,     7.00,     7.00,    2.00)  DC
          8TH HIGHEST VALUE IS       0.00425 AT (  382648.00,  3744913.00,     7.00,     7.00,    2.00)  DC
          9TH HIGHEST VALUE IS       0.00425 AT (  382648.00,  3744943.00,     7.00,     7.00,    2.00)  DC
         10TH HIGHEST VALUE IS       0.00421 AT (  382648.00,  3744898.00,     7.00,     7.00,    2.00)  DC


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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 1                                      ***        14:48:41
                                                                                                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of         1017 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          747 Calm Hours Identified

 A Total of          270 Missing Hours Identified (  0.62 Percent)


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

    ********   WARNING MESSAGES   ********
 ME W186    1306       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    1306       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

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

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

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

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO 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   416 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   9818605.0 ; Urban Roughness Length = 1.000 m

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

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

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 416 Source(s);   1 Source Group(s); and   25 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 416 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) =   10.00 ; 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 =   3.8 MB of RAM.

```
**Input Runstream File:          F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_2A_2012-2016_OTHER.DTA
**Output Print File:             F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_2A_2012-2016_OTHER.LST

**File for Summary of Results:   F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_2A_2012-2016_OTHER.SUM
```


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

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

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

```
  Surface file:   F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.SFC         Met Version:  16216
  Profile file:   F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:    23129                 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	-5.3	0.094	-9.000	-9.000	-999.	70.	14.3	0.10	2.68	1.00	1.13	322.	7.9	282.0	2.0
12	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	281.4	2.0
12	01	01	1	03	-2.5	0.068	-9.000	-9.000	-999.	43.	11.4	0.10	2.68	1.00	0.74	79.	7.9	280.9	2.0
12	01	01	1	04	-3.2	0.075	-9.000	-9.000	-999.	49.	11.7	0.10	2.68	1.00	0.86	137.	7.9	280.9	2.0
12	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	280.4	2.0
12	01	01	1	06	-5.2	0.093	-9.000	-9.000	-999.	68.	14.0	0.10	2.68	1.00	1.11	92.	7.9	279.9	2.0
12	01	01	1	07	-2.3	0.066	-9.000	-9.000	-999.	41.	11.5	0.10	2.68	1.00	0.69	67.	7.9	278.8	2.0
12	01	01	1	08	-1.7	0.060	-9.000	-9.000	-999.	36.	11.4	0.10	2.68	0.54	0.65	91.	7.9	279.9	2.0
12	01	01	1	09	36.2	-9.000	-9.000	-9.000	37.	-999.	-99999.0	0.10	2.68	0.31	0.00	0.	7.9	283.8	2.0
12	01	01	1	10	108.4	0.139	0.707	0.009	119.	124.	-2.3	0.10	2.68	0.24	0.92	319.	7.9	287.5	2.0
12	01	01	1	11	160.5	0.114	1.137	0.005	334.	93.	-1.0	0.10	2.68	0.21	0.62	23.	7.9	292.5	2.0
12	01	01	1	12	186.7	0.125	1.473	0.005	623.	105.	-1.0	0.10	2.68	0.20	0.69	18.	7.9	295.4	2.0
12	01	01	1	13	186.8	0.130	1.761	0.005	1065.	112.	-1.1	0.10	2.68	0.20	0.74	250.	7.9	297.5	2.0
12	01	01	1	14	161.7	0.150	1.834	0.005	1387.	139.	-1.9	0.10	2.68	0.21	0.96	347.	7.9	300.4	2.0
12	01	01	1	15	105.5	0.243	1.633	0.005	1499.	288.	-12.4	0.10	2.68	0.24	2.11	194.	7.9	295.9	2.0
12	01	01	1	16	32.4	0.211	1.109	0.005	1530.	233.	-26.3	0.10	2.68	0.33	1.98	186.	7.9	295.4	2.0
12	01	01	1	17	-20.5	0.250	-9.000	-9.000	-999.	300.	69.2	0.10	2.68	0.60	2.81	293.	7.9	291.4	2.0
12	01	01	1	18	-25.4	0.257	-9.000	-9.000	-999.	313.	72.8	0.10	2.68	1.00	2.90	301.	7.9	288.1	2.0
12	01	01	1	19	-21.0	0.211	-9.000	-9.000	-999.	233.	49.0	0.10	2.68	1.00	2.40	313.	7.9	286.4	2.0
12	01	01	1	20	-25.7	0.258	-9.000	-9.000	-999.	315.	73.3	0.10	2.68	1.00	2.91	302.	7.9	286.4	2.0
12	01	01	1	21	-22.5	0.225	-9.000	-9.000	-999.	256.	55.7	0.10	2.68	1.00	2.55	306.	7.9	285.4	2.0

```
 12 01 01   1 22   -9.3  0.126 -9.000 -9.000 -999.  111.     19.5  0.10   2.68   1.00    1.48  284.    7.9  285.9    2.0
 12 01 01   1 23  -21.4  0.214 -9.000 -9.000 -999.  237.     50.3  0.10   2.68   1.00    2.43  282.    7.9  285.4    2.0
 12 01 01   1 24  -30.1  0.300 -9.000 -9.000 -999.  394.     98.9  0.10   2.68   1.00    3.36  300.    7.9  284.2    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  322.    1.13   282.1   99.0  -99.00  -99.00

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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 2                                      ***        15:00:17
                                                                                                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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


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

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

ALL       1ST HIGHEST VALUE IS       0.01010 AT (  382862.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          2ND HIGHEST VALUE IS       0.00899 AT (  382822.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          3RD HIGHEST VALUE IS       0.00868 AT (  382800.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          4TH HIGHEST VALUE IS       0.00642 AT (  382742.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          5TH HIGHEST VALUE IS       0.00607 AT (  382699.00,  3744742.00,     7.00,     7.00,    2.00)  DC
          6TH HIGHEST VALUE IS       0.00504 AT (  382655.00,  3744983.00,     7.00,     7.00,    2.00)  DC
          7TH HIGHEST VALUE IS       0.00454 AT (  382648.00,  3744928.00,     7.00,     7.00,    2.00)  DC
          8TH HIGHEST VALUE IS       0.00452 AT (  382648.00,  3744913.00,     7.00,     7.00,    2.00)  DC
          9TH HIGHEST VALUE IS       0.00452 AT (  382648.00,  3744943.00,     7.00,     7.00,    2.00)  DC
         10TH HIGHEST VALUE IS       0.00449 AT (  382648.00,  3744898.00,     7.00,     7.00,    2.00)  DC


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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 2                                      ***        15:00:17
                                                                                                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of         1017 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          747 Calm Hours Identified

 A Total of          270 Missing Hours Identified (  0.62 Percent)


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

    ********   WARNING MESSAGES   ********
 ME W186    1306       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    1306       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

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

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

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

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO 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   416 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   9818605.0 ; Urban Roughness Length = 1.000 m

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

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

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 416 Source(s);   1 Source Group(s); and   25 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 416 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) =   10.00 ; 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 =   3.8 MB of RAM.
**Input Runstream File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_3A_2012-2016_OTHER.DTA

```
**Output Print File:           F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_3A_2012-2016_OTHER.LST

**File for Summary of Results:   F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_3A_2012-2016_OTHER.SUM

*** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
*** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 3                                      ***        15:07:34
                                                                                                                    PAGE   2
*** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

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

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


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

                                                     1.54,   3.09,   5.14,   8.23,  10.80,

*** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
*** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 3                                      ***        15:07:34
                                                                                                                    PAGE   3
*** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

  Surface file:   F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.SFC          Met Version:  16216
  Profile file:   F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:     23129                  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	-5.3	0.094	-9.000	-9.000	-999.	70.	14.3	0.10	2.68	1.00	1.13	322.	7.9	282.0	2.0
12	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	281.4	2.0
12	01	01	1	03	-2.5	0.068	-9.000	-9.000	-999.	43.	11.4	0.10	2.68	1.00	0.74	79.	7.9	280.9	2.0
12	01	01	1	04	-3.2	0.075	-9.000	-9.000	-999.	49.	11.7	0.10	2.68	1.00	0.86	137.	7.9	280.9	2.0
12	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	280.4	2.0
12	01	01	1	06	-5.2	0.093	-9.000	-9.000	-999.	68.	14.0	0.10	2.68	1.00	1.11	92.	7.9	279.9	2.0
12	01	01	1	07	-2.3	0.066	-9.000	-9.000	-999.	41.	11.5	0.10	2.68	1.00	0.69	67.	7.9	278.8	2.0
12	01	01	1	08	-1.7	0.060	-9.000	-9.000	-999.	36.	11.4	0.10	2.68	0.54	0.65	91.	7.9	279.9	2.0
12	01	01	1	09	36.2	-9.000	-9.000	-9.000	37.	-999.	-99999.0	0.10	2.68	0.31	0.00	0.	7.9	283.8	2.0
12	01	01	1	10	108.4	0.139	0.707	0.009	119.	124.	-2.3	0.10	2.68	0.24	0.92	319.	7.9	287.5	2.0
12	01	01	1	11	160.5	0.114	1.137	0.005	334.	93.	-1.0	0.10	2.68	0.21	0.62	23.	7.9	292.5	2.0
12	01	01	1	12	186.7	0.125	1.473	0.005	623.	105.	-1.0	0.10	2.68	0.20	0.69	18.	7.9	295.4	2.0
12	01	01	1	13	186.8	0.130	1.761	0.005	1065.	112.	-1.1	0.10	2.68	0.20	0.74	250.	7.9	297.5	2.0
12	01	01	1	14	161.7	0.150	1.834	0.005	1387.	139.	-1.9	0.10	2.68	0.21	0.96	347.	7.9	300.4	2.0
12	01	01	1	15	105.5	0.243	1.633	0.005	1499.	288.	-12.4	0.10	2.68	0.24	2.11	194.	7.9	295.9	2.0
12	01	01	1	16	32.4	0.211	1.109	0.005	1530.	233.	-26.3	0.10	2.68	0.33	1.98	186.	7.9	295.4	2.0
12	01	01	1	17	-20.5	0.250	-9.000	-9.000	-999.	300.	69.2	0.10	2.68	0.60	2.81	293.	7.9	291.4	2.0
12	01	01	1	18	-25.4	0.257	-9.000	-9.000	-999.	313.	72.8	0.10	2.68	1.00	2.90	301.	7.9	288.1	2.0
12	01	01	1	19	-21.0	0.211	-9.000	-9.000	-999.	233.	49.0	0.10	2.68	1.00	2.40	313.	7.9	286.4	2.0
12	01	01	1	20	-25.7	0.258	-9.000	-9.000	-999.	315.	73.3	0.10	2.68	1.00	2.91	302.	7.9	286.4	2.0
12	01	01	1	21	-22.5	0.225	-9.000	-9.000	-999.	256.	55.7	0.10	2.68	1.00	2.55	306.	7.9	285.4	2.0
12	01	01	1	22	-9.3	0.126	-9.000	-9.000	-999.	111.	19.5	0.10	2.68	1.00	1.48	284.	7.9	285.9	2.0

```
 12 01 01   1 23  -21.4  0.214 -9.000 -9.000 -999.  237.     50.3  0.10   2.68   1.00    2.43  282.    7.9  285.4    2.0
 12 01 01   1 24  -30.1  0.300 -9.000 -9.000 -999.  394.     98.9  0.10   2.68   1.00    3.36  300.    7.9  284.2    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  322.    1.13   282.1   99.0  -99.00  -99.00

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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 3                                      ***        15:07:34
                                                                                                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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


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

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

ALL       1ST HIGHEST VALUE IS       0.01944 AT (  382862.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          2ND HIGHEST VALUE IS       0.01732 AT (  382822.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          3RD HIGHEST VALUE IS       0.01671 AT (  382800.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          4TH HIGHEST VALUE IS       0.01236 AT (  382742.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          5TH HIGHEST VALUE IS       0.01170 AT (  382699.00,  3744742.00,     7.00,     7.00,    2.00)  DC
          6TH HIGHEST VALUE IS       0.00970 AT (  382655.00,  3744983.00,     7.00,     7.00,    2.00)  DC
          7TH HIGHEST VALUE IS       0.00874 AT (  382648.00,  3744928.00,     7.00,     7.00,    2.00)  DC
          8TH HIGHEST VALUE IS       0.00871 AT (  382648.00,  3744913.00,     7.00,     7.00,    2.00)  DC
          9TH HIGHEST VALUE IS       0.00871 AT (  382648.00,  3744943.00,     7.00,     7.00,    2.00)  DC
         10TH HIGHEST VALUE IS       0.00864 AT (  382648.00,  3744898.00,     7.00,     7.00,    2.00)  DC


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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 3                                      ***        15:07:34
                                                                                                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of         1017 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          747 Calm Hours Identified

 A Total of          270 Missing Hours Identified (  0.62 Percent)


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

    ********   WARNING MESSAGES   ********
 ME W186    1306       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    1306       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

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

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

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

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO 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   417 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   9818605.0 ; Urban Roughness Length = 1.000 m

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

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

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 417 Source(s);   1 Source Group(s); and   25 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 417 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) =   10.00 ; 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 =   3.8 MB of RAM.

**Input Runstream File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_4A_2012-2016_OTHER.DTA
**Output Print File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_4A_2012-2016_OTHER.LST

**File for Summary of Results: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_4A_2012-2016_OTHER.SUM

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

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

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

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

Surface file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.SFC   Met Version: 16216
Profile file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   23129   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	-5.3	0.094	-9.000	-9.000	-999.	70.	14.3	0.10	2.68	1.00	1.13	322.	7.9	282.0	2.0
12	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	281.4	2.0
12	01	01	1	03	-2.5	0.068	-9.000	-9.000	-999.	43.	11.4	0.10	2.68	1.00	0.74	79.	7.9	280.9	2.0
12	01	01	1	04	-3.2	0.075	-9.000	-9.000	-999.	49.	11.7	0.10	2.68	1.00	0.86	137.	7.9	280.9	2.0
12	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	280.4	2.0
12	01	01	1	06	-5.2	0.093	-9.000	-9.000	-999.	68.	14.0	0.10	2.68	1.00	1.11	92.	7.9	279.9	2.0
12	01	01	1	07	-2.3	0.066	-9.000	-9.000	-999.	41.	11.5	0.10	2.68	1.00	0.69	67.	7.9	278.8	2.0
12	01	01	1	08	-1.7	0.060	-9.000	-9.000	-999.	36.	11.4	0.10	2.68	0.54	0.65	91.	7.9	279.9	2.0
12	01	01	1	09	36.2	-9.000	-9.000	-9.000	37.	-999.	-99999.0	0.10	2.68	0.31	0.00	0.	7.9	283.8	2.0
12	01	01	1	10	108.4	0.139	0.707	0.009	119.	124.	-2.3	0.10	2.68	0.24	0.92	319.	7.9	287.5	2.0
12	01	01	1	11	160.5	0.114	1.137	0.005	334.	93.	-1.0	0.10	2.68	0.21	0.62	23.	7.9	292.5	2.0
12	01	01	1	12	186.7	0.125	1.473	0.005	623.	105.	-1.0	0.10	2.68	0.20	0.69	18.	7.9	295.4	2.0
12	01	01	1	13	186.8	0.130	1.761	0.005	1065.	112.	-1.1	0.10	2.68	0.20	0.74	250.	7.9	297.5	2.0
12	01	01	1	14	161.7	0.150	1.834	0.005	1387.	139.	-1.9	0.10	2.68	0.21	0.96	347.	7.9	300.4	2.0
12	01	01	1	15	105.5	0.243	1.633	0.005	1499.	288.	-12.4	0.10	2.68	0.24	2.11	194.	7.9	295.9	2.0
12	01	01	1	16	32.4	0.211	1.109	0.005	1530.	233.	-26.3	0.10	2.68	0.33	1.98	186.	7.9	295.4	2.0
12	01	01	1	17	-20.5	0.250	-9.000	-9.000	-999.	300.	69.2	0.10	2.68	0.60	2.81	293.	7.9	291.4	2.0
12	01	01	1	18	-25.4	0.257	-9.000	-9.000	-999.	313.	72.8	0.10	2.68	1.00	2.90	301.	7.9	288.1	2.0
12	01	01	1	19	-21.0	0.211	-9.000	-9.000	-999.	233.	49.0	0.10	2.68	1.00	2.40	313.	7.9	286.4	2.0
12	01	01	1	20	-25.7	0.258	-9.000	-9.000	-999.	315.	73.3	0.10	2.68	1.00	2.91	302.	7.9	286.4	2.0
12	01	01	1	21	-22.5	0.225	-9.000	-9.000	-999.	256.	55.7	0.10	2.68	1.00	2.55	306.	7.9	285.4	2.0

```
 12 01 01   1 22   -9.3  0.126 -9.000 -9.000 -999.  111.     19.5  0.10   2.68   1.00    1.48  284.    7.9  285.9    2.0
 12 01 01   1 23  -21.4  0.214 -9.000 -9.000 -999.  237.     50.3  0.10   2.68   1.00    2.43  282.    7.9  285.4    2.0
 12 01 01   1 24  -30.1  0.300 -9.000 -9.000 -999.  394.     98.9  0.10   2.68   1.00    3.36  300.    7.9  284.2    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  322.    1.13   282.1   99.0  -99.00  -99.00

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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/10/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 4                                      ***        09:04:16
                                                                                                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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


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

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

ALL       1ST HIGHEST VALUE IS       0.02314 AT (  382862.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          2ND HIGHEST VALUE IS       0.02052 AT (  382822.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          3RD HIGHEST VALUE IS       0.01973 AT (  382800.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          4TH HIGHEST VALUE IS       0.01457 AT (  382742.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          5TH HIGHEST VALUE IS       0.01376 AT (  382699.00,  3744742.00,     7.00,     7.00,    2.00)  DC
          6TH HIGHEST VALUE IS       0.01151 AT (  382655.00,  3744983.00,     7.00,     7.00,    2.00)  DC
          7TH HIGHEST VALUE IS       0.01040 AT (  382648.00,  3744928.00,     7.00,     7.00,    2.00)  DC
          8TH HIGHEST VALUE IS       0.01037 AT (  382648.00,  3744913.00,     7.00,     7.00,    2.00)  DC
          9TH HIGHEST VALUE IS       0.01036 AT (  382648.00,  3744943.00,     7.00,     7.00,    2.00)  DC
         10TH HIGHEST VALUE IS       0.01029 AT (  382648.00,  3744898.00,     7.00,     7.00,    2.00)  DC


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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/10/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 4                                      ***        09:04:16
                                                                                                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of         1017 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          747 Calm Hours Identified

 A Total of          270 Missing Hours Identified (  0.62 Percent)


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

    ********   WARNING MESSAGES   ********
 ME W186    1309       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    1309       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

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

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

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

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO 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   417 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   9818605.0 ; Urban Roughness Length = 1.000 m

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

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

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 417 Source(s);   1 Source Group(s); and   25 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 417 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) =   10.00 ; 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 =   3.8 MB of RAM.

**Input Runstream File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_5A_2012-2016_OTHER.DTA
**Output Print File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_5A_2012-2016_OTHER.LST

**File for Summary of Results: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_5A_2012-2016_OTHER.SUM

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

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

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

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

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

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

Surface file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.SFC   Met Version: 16216
Profile file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   23129   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	-5.3	0.094	-9.000	-9.000	-999.	70.	14.3	0.10	2.68	1.00	1.13	322.	7.9	282.0	2.0
12	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	281.4	2.0
12	01	01	1	03	-2.5	0.068	-9.000	-9.000	-999.	43.	11.4	0.10	2.68	1.00	0.74	79.	7.9	280.9	2.0
12	01	01	1	04	-3.2	0.075	-9.000	-9.000	-999.	49.	11.7	0.10	2.68	1.00	0.86	137.	7.9	280.9	2.0
12	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	280.4	2.0
12	01	01	1	06	-5.2	0.093	-9.000	-9.000	-999.	68.	14.0	0.10	2.68	1.00	1.11	92.	7.9	279.9	2.0
12	01	01	1	07	-2.3	0.066	-9.000	-9.000	-999.	41.	11.5	0.10	2.68	1.00	0.69	67.	7.9	278.8	2.0
12	01	01	1	08	-1.7	0.060	-9.000	-9.000	-999.	36.	11.4	0.10	2.68	0.54	0.65	91.	7.9	279.9	2.0
12	01	01	1	09	36.2	-9.000	-9.000	-9.000	37.	-999.	-99999.0	0.10	2.68	0.31	0.00	0.	7.9	283.8	2.0
12	01	01	1	10	108.4	0.139	0.707	0.009	119.	124.	-2.3	0.10	2.68	0.24	0.92	319.	7.9	287.5	2.0
12	01	01	1	11	160.5	0.114	1.137	0.005	334.	93.	-1.0	0.10	2.68	0.21	0.62	23.	7.9	292.5	2.0
12	01	01	1	12	186.7	0.125	1.473	0.005	623.	105.	-1.0	0.10	2.68	0.20	0.69	18.	7.9	295.4	2.0
12	01	01	1	13	186.8	0.130	1.761	0.005	1065.	112.	-1.1	0.10	2.68	0.20	0.74	250.	7.9	297.5	2.0
12	01	01	1	14	161.7	0.150	1.834	0.005	1387.	139.	-1.9	0.10	2.68	0.21	0.96	347.	7.9	300.4	2.0
12	01	01	1	15	105.5	0.243	1.633	0.005	1499.	288.	-12.4	0.10	2.68	0.24	2.11	194.	7.9	295.9	2.0
12	01	01	1	16	32.4	0.211	1.109	0.005	1530.	233.	-26.3	0.10	2.68	0.33	1.98	186.	7.9	295.4	2.0
12	01	01	1	17	-20.5	0.250	-9.000	-9.000	-999.	300.	69.2	0.10	2.68	0.60	2.81	293.	7.9	291.4	2.0
12	01	01	1	18	-25.4	0.257	-9.000	-9.000	-999.	313.	72.8	0.10	2.68	1.00	2.90	301.	7.9	288.1	2.0
12	01	01	1	19	-21.0	0.211	-9.000	-9.000	-999.	233.	49.0	0.10	2.68	1.00	2.40	313.	7.9	286.4	2.0
12	01	01	1	20	-25.7	0.258	-9.000	-9.000	-999.	315.	73.3	0.10	2.68	1.00	2.91	302.	7.9	286.4	2.0
12	01	01	1	21	-22.5	0.225	-9.000	-9.000	-999.	256.	55.7	0.10	2.68	1.00	2.55	306.	7.9	285.4	2.0

```
 12 01 01   1 22   -9.3  0.126 -9.000 -9.000 -999.  111.     19.5  0.10   2.68   1.00    1.48  284.    7.9  285.9    2.0
 12 01 01   1 23  -21.4  0.214 -9.000 -9.000 -999.  237.     50.3  0.10   2.68   1.00    2.43  282.    7.9  285.4    2.0
 12 01 01   1 24  -30.1  0.300 -9.000 -9.000 -999.  394.     98.9  0.10   2.68   1.00    3.36  300.    7.9  284.2    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  322.    1.13   282.1   99.0  -99.00  -99.00

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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 5                                      ***        15:30:49
                                                                                                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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


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

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

ALL       1ST HIGHEST VALUE IS       0.02501 AT (  382862.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          2ND HIGHEST VALUE IS       0.02220 AT (  382822.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          3RD HIGHEST VALUE IS       0.02137 AT (  382800.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          4TH HIGHEST VALUE IS       0.01578 AT (  382742.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          5TH HIGHEST VALUE IS       0.01491 AT (  382699.00,  3744742.00,     7.00,     7.00,    2.00)  DC
          6TH HIGHEST VALUE IS       0.01244 AT (  382655.00,  3744983.00,     7.00,     7.00,    2.00)  DC
          7TH HIGHEST VALUE IS       0.01123 AT (  382648.00,  3744928.00,     7.00,     7.00,    2.00)  DC
          8TH HIGHEST VALUE IS       0.01120 AT (  382648.00,  3744913.00,     7.00,     7.00,    2.00)  DC
          9TH HIGHEST VALUE IS       0.01120 AT (  382648.00,  3744943.00,     7.00,     7.00,    2.00)  DC
         10TH HIGHEST VALUE IS       0.01111 AT (  382648.00,  3744898.00,     7.00,     7.00,    2.00)  DC


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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 5                                      ***        15:30:49
                                                                                                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of         1017 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          747 Calm Hours Identified

 A Total of          270 Missing Hours Identified (  0.62 Percent)


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

    ********   WARNING MESSAGES   ********
 ME W186    1309       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    1309       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

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

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

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

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO 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   417 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   9818605.0 ; Urban Roughness Length = 1.000 m

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

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

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 417 Source(s);   1 Source Group(s); and   25 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 417 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) =   10.00 ; 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 =   3.8 MB of RAM.

**Input Runstream File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_6A_2012-2016_OTHER.DTA
**Output Print File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_6A_2012-2016_OTHER.LST

**File for Summary of Results: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_6A_2012-2016_OTHER.SUM

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

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

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

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

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

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

Surface file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.SFC   Met Version: 16216
Profile file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   23129   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	-5.3	0.094	-9.000	-9.000	-999.	70.	14.3	0.10	2.68	1.00	1.13	322.	7.9	282.0	2.0
12	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	281.4	2.0
12	01	01	1	03	-2.5	0.068	-9.000	-9.000	-999.	43.	11.4	0.10	2.68	1.00	0.74	79.	7.9	280.9	2.0
12	01	01	1	04	-3.2	0.075	-9.000	-9.000	-999.	49.	11.7	0.10	2.68	1.00	0.86	137.	7.9	280.9	2.0
12	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	280.4	2.0
12	01	01	1	06	-5.2	0.093	-9.000	-9.000	-999.	68.	14.0	0.10	2.68	1.00	1.11	92.	7.9	279.9	2.0
12	01	01	1	07	-2.3	0.066	-9.000	-9.000	-999.	41.	11.5	0.10	2.68	1.00	0.69	67.	7.9	278.8	2.0
12	01	01	1	08	-1.7	0.060	-9.000	-9.000	-999.	36.	11.4	0.10	2.68	0.54	0.65	91.	7.9	279.9	2.0
12	01	01	1	09	36.2	-9.000	-9.000	-9.000	37.	-999.	-99999.0	0.10	2.68	0.31	0.00	0.	7.9	283.8	2.0
12	01	01	1	10	108.4	0.139	0.707	0.009	119.	124.	-2.3	0.10	2.68	0.24	0.92	319.	7.9	287.5	2.0
12	01	01	1	11	160.5	0.114	1.137	0.005	334.	93.	-1.0	0.10	2.68	0.21	0.62	23.	7.9	292.5	2.0
12	01	01	1	12	186.7	0.125	1.473	0.005	623.	105.	-1.0	0.10	2.68	0.20	0.69	18.	7.9	295.4	2.0
12	01	01	1	13	186.8	0.130	1.761	0.005	1065.	112.	-1.1	0.10	2.68	0.20	0.74	250.	7.9	297.5	2.0
12	01	01	1	14	161.7	0.150	1.834	0.005	1387.	139.	-1.9	0.10	2.68	0.21	0.96	347.	7.9	300.4	2.0
12	01	01	1	15	105.5	0.243	1.633	0.005	1499.	288.	-12.4	0.10	2.68	0.24	2.11	194.	7.9	295.9	2.0
12	01	01	1	16	32.4	0.211	1.109	0.005	1530.	233.	-26.3	0.10	2.68	0.33	1.98	186.	7.9	295.4	2.0
12	01	01	1	17	-20.5	0.250	-9.000	-9.000	-999.	300.	69.2	0.10	2.68	0.60	2.81	293.	7.9	291.4	2.0
12	01	01	1	18	-25.4	0.257	-9.000	-9.000	-999.	313.	72.8	0.10	2.68	1.00	2.90	301.	7.9	288.1	2.0
12	01	01	1	19	-21.0	0.211	-9.000	-9.000	-999.	233.	49.0	0.10	2.68	1.00	2.40	313.	7.9	286.4	2.0
12	01	01	1	20	-25.7	0.258	-9.000	-9.000	-999.	315.	73.3	0.10	2.68	1.00	2.91	302.	7.9	286.4	2.0
12	01	01	1	21	-22.5	0.225	-9.000	-9.000	-999.	256.	55.7	0.10	2.68	1.00	2.55	306.	7.9	285.4	2.0

```
 12 01 01   1 22   -9.3  0.126 -9.000 -9.000 -999.  111.     19.5  0.10   2.68   1.00    1.48  284.    7.9  285.9    2.0
 12 01 01   1 23  -21.4  0.214 -9.000 -9.000 -999.  237.     50.3  0.10   2.68   1.00    2.43  282.    7.9  285.4    2.0
 12 01 01   1 24  -30.1  0.300 -9.000 -9.000 -999.  394.     98.9  0.10   2.68   1.00    3.36  300.    7.9  284.2    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  322.    1.13   282.1   99.0  -99.00  -99.00

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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 6                                      ***        15:41:21
                                                                                                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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


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

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

ALL       1ST HIGHEST VALUE IS       0.02556 AT (  382862.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          2ND HIGHEST VALUE IS       0.02269 AT (  382822.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          3RD HIGHEST VALUE IS       0.02184 AT (  382800.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          4TH HIGHEST VALUE IS       0.01614 AT (  382742.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          5TH HIGHEST VALUE IS       0.01525 AT (  382699.00,  3744742.00,     7.00,     7.00,    2.00)  DC
          6TH HIGHEST VALUE IS       0.01271 AT (  382655.00,  3744983.00,     7.00,     7.00,    2.00)  DC
          7TH HIGHEST VALUE IS       0.01148 AT (  382648.00,  3744928.00,     7.00,     7.00,    2.00)  DC
          8TH HIGHEST VALUE IS       0.01145 AT (  382648.00,  3744913.00,     7.00,     7.00,    2.00)  DC
          9TH HIGHEST VALUE IS       0.01144 AT (  382648.00,  3744943.00,     7.00,     7.00,    2.00)  DC
         10TH HIGHEST VALUE IS       0.01136 AT (  382648.00,  3744898.00,     7.00,     7.00,    2.00)  DC


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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 6                                      ***        15:41:21
                                                                                                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of         1017 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          747 Calm Hours Identified

 A Total of          270 Missing Hours Identified (  0.62 Percent)


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

    ********   WARNING MESSAGES   ********
 ME W186    1309       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    1309       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

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

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

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

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO 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   54 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   9818605.0 ; Urban Roughness Length = 1.000 m

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

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

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 54 Source(s);   1 Source Group(s); and   25 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 54 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) =   10.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/SEC   ; Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

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

**Input Runstream File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_7A_2012-2016_OTHER.DTA
**Output Print File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_7A_2012-2016_OTHER.LST

**File for Summary of Results: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_7A_2012-2016_OTHER.SUM

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

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

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

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

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

Surface file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.SFC   Met Version: 16216
Profile file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   23129   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	-5.3	0.094	-9.000	-9.000	-999.	70.	14.3	0.10	2.68	1.00	1.13	322.	7.9	282.0	2.0
12	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	281.4	2.0
12	01	01	1	03	-2.5	0.068	-9.000	-9.000	-999.	43.	11.4	0.10	2.68	1.00	0.74	79.	7.9	280.9	2.0
12	01	01	1	04	-3.2	0.075	-9.000	-9.000	-999.	49.	11.7	0.10	2.68	1.00	0.86	137.	7.9	280.9	2.0
12	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	280.4	2.0
12	01	01	1	06	-5.2	0.093	-9.000	-9.000	-999.	68.	14.0	0.10	2.68	1.00	1.11	92.	7.9	279.9	2.0
12	01	01	1	07	-2.3	0.066	-9.000	-9.000	-999.	41.	11.5	0.10	2.68	1.00	0.69	67.	7.9	278.8	2.0
12	01	01	1	08	-1.7	0.060	-9.000	-9.000	-999.	36.	11.4	0.10	2.68	0.54	0.65	91.	7.9	279.9	2.0
12	01	01	1	09	36.2	-9.000	-9.000	-9.000	37.	-999.	-99999.0	0.10	2.68	0.31	0.00	0.	7.9	283.8	2.0
12	01	01	1	10	108.4	0.139	0.707	0.009	119.	124.	-2.3	0.10	2.68	0.24	0.92	319.	7.9	287.5	2.0
12	01	01	1	11	160.5	0.114	1.137	0.005	334.	93.	-1.0	0.10	2.68	0.21	0.62	23.	7.9	292.5	2.0
12	01	01	1	12	186.7	0.125	1.473	0.005	623.	105.	-1.0	0.10	2.68	0.20	0.69	18.	7.9	295.4	2.0
12	01	01	1	13	186.8	0.130	1.761	0.005	1065.	112.	-1.1	0.10	2.68	0.20	0.74	250.	7.9	297.5	2.0
12	01	01	1	14	161.7	0.150	1.834	0.005	1387.	139.	-1.9	0.10	2.68	0.21	0.96	347.	7.9	300.4	2.0
12	01	01	1	15	105.5	0.243	1.633	0.005	1499.	288.	-12.4	0.10	2.68	0.24	2.11	194.	7.9	295.9	2.0
12	01	01	1	16	32.4	0.211	1.109	0.005	1530.	233.	-26.3	0.10	2.68	0.33	1.98	186.	7.9	295.4	2.0
12	01	01	1	17	-20.5	0.250	-9.000	-9.000	-999.	300.	69.2	0.10	2.68	0.60	2.81	293.	7.9	291.4	2.0
12	01	01	1	18	-25.4	0.257	-9.000	-9.000	-999.	313.	72.8	0.10	2.68	1.00	2.90	301.	7.9	288.1	2.0
12	01	01	1	19	-21.0	0.211	-9.000	-9.000	-999.	233.	49.0	0.10	2.68	1.00	2.40	313.	7.9	286.4	2.0
12	01	01	1	20	-25.7	0.258	-9.000	-9.000	-999.	315.	73.3	0.10	2.68	1.00	2.91	302.	7.9	286.4	2.0
12	01	01	1	21	-22.5	0.225	-9.000	-9.000	-999.	256.	55.7	0.10	2.68	1.00	2.55	306.	7.9	285.4	2.0

```
 12 01 01   1 22   -9.3  0.126 -9.000 -9.000 -999.  111.     19.5  0.10   2.68   1.00    1.48  284.    7.9  285.9    2.0
 12 01 01   1 23  -21.4  0.214 -9.000 -9.000 -999.  237.     50.3  0.10   2.68   1.00    2.43  282.    7.9  285.4    2.0
 12 01 01   1 24  -30.1  0.300 -9.000 -9.000 -999.  394.     98.9  0.10   2.68   1.00    3.36  300.    7.9  284.2    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  322.    1.13   282.1   99.0  -99.00  -99.00

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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 7                                      ***        15:46:06
                                                                                                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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


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

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

ALL       1ST HIGHEST VALUE IS       0.00123 AT (  382862.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          2ND HIGHEST VALUE IS       0.00097 AT (  382822.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          3RD HIGHEST VALUE IS       0.00085 AT (  382800.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          4TH HIGHEST VALUE IS       0.00061 AT (  382655.00,  3744983.00,     7.00,     7.00,    2.00)  DC
          5TH HIGHEST VALUE IS       0.00060 AT (  382742.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          6TH HIGHEST VALUE IS       0.00060 AT (  382648.00,  3744928.00,     7.00,     7.00,    2.00)  DC
          7TH HIGHEST VALUE IS       0.00060 AT (  382648.00,  3744943.00,     7.00,     7.00,    2.00)  DC
          8TH HIGHEST VALUE IS       0.00060 AT (  382648.00,  3744913.00,     7.00,     7.00,    2.00)  DC
          9TH HIGHEST VALUE IS       0.00059 AT (  382648.00,  3744958.00,     7.00,     7.00,    2.00)  DC
         10TH HIGHEST VALUE IS       0.00059 AT (  382648.00,  3744898.00,     7.00,     7.00,    2.00)  DC


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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 7                                      ***        15:46:06
                                                                                                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of         1017 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          747 Calm Hours Identified

 A Total of          270 Missing Hours Identified (  0.62 Percent)


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

    ********   WARNING MESSAGES   ********
 ME W186     220       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187     220       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

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

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

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

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO 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   40 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   9818605.0 ; Urban Roughness Length = 1.000 m

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

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

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 40 Source(s);   1 Source Group(s); and   25 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 40 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) =   10.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/SEC   ; Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

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

**Input Runstream File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_8A_2012-2016_OTHER.DTA
**Output Print File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_8A_2012-2016_OTHER.LST

**File for Summary of Results: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_8A_2012-2016_OTHER.SUM

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

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

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

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

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

1.54, 3.09, 5.14, 8.23, 10.80,

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

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

Surface file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.SFC Met Version: 16216
Profile file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 23129 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	-5.3	0.094	-9.000	-9.000	-999.	70.	14.3	0.10	2.68	1.00	1.13	322.	7.9	282.0	2.0
12	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	281.4	2.0
12	01	01	1	03	-2.5	0.068	-9.000	-9.000	-999.	43.	11.4	0.10	2.68	1.00	0.74	79.	7.9	280.9	2.0
12	01	01	1	04	-3.2	0.075	-9.000	-9.000	-999.	49.	11.7	0.10	2.68	1.00	0.86	137.	7.9	280.9	2.0
12	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	280.4	2.0
12	01	01	1	06	-5.2	0.093	-9.000	-9.000	-999.	68.	14.0	0.10	2.68	1.00	1.11	92.	7.9	279.9	2.0
12	01	01	1	07	-2.3	0.066	-9.000	-9.000	-999.	41.	11.5	0.10	2.68	1.00	0.69	67.	7.9	278.8	2.0
12	01	01	1	08	-1.7	0.060	-9.000	-9.000	-999.	36.	11.4	0.10	2.68	0.54	0.65	91.	7.9	279.9	2.0
12	01	01	1	09	36.2	-9.000	-9.000	-9.000	37.	-999.	-99999.0	0.10	2.68	0.31	0.00	0.	7.9	283.8	2.0
12	01	01	1	10	108.4	0.139	0.707	0.009	119.	124.	-2.3	0.10	2.68	0.24	0.92	319.	7.9	287.5	2.0
12	01	01	1	11	160.5	0.114	1.137	0.005	334.	93.	-1.0	0.10	2.68	0.21	0.62	23.	7.9	292.5	2.0
12	01	01	1	12	186.7	0.125	1.473	0.005	623.	105.	-1.0	0.10	2.68	0.20	0.69	18.	7.9	295.4	2.0
12	01	01	1	13	186.8	0.130	1.761	0.005	1065.	112.	-1.1	0.10	2.68	0.20	0.74	250.	7.9	297.5	2.0
12	01	01	1	14	161.7	0.150	1.834	0.005	1387.	139.	-1.9	0.10	2.68	0.21	0.96	347.	7.9	300.4	2.0
12	01	01	1	15	105.5	0.243	1.633	0.005	1499.	288.	-12.4	0.10	2.68	0.24	2.11	194.	7.9	295.9	2.0
12	01	01	1	16	32.4	0.211	1.109	0.005	1530.	233.	-26.3	0.10	2.68	0.33	1.98	186.	7.9	295.4	2.0
12	01	01	1	17	-20.5	0.250	-9.000	-9.000	-999.	300.	69.2	0.10	2.68	0.60	2.81	293.	7.9	291.4	2.0
12	01	01	1	18	-25.4	0.257	-9.000	-9.000	-999.	313.	72.8	0.10	2.68	1.00	2.90	301.	7.9	288.1	2.0
12	01	01	1	19	-21.0	0.211	-9.000	-9.000	-999.	233.	49.0	0.10	2.68	1.00	2.40	313.	7.9	286.4	2.0
12	01	01	1	20	-25.7	0.258	-9.000	-9.000	-999.	315.	73.3	0.10	2.68	1.00	2.91	302.	7.9	286.4	2.0
12	01	01	1	21	-22.5	0.225	-9.000	-9.000	-999.	256.	55.7	0.10	2.68	1.00	2.55	306.	7.9	285.4	2.0

```
 12 01 01   1 22   -9.3  0.126 -9.000 -9.000 -999.  111.     19.5  0.10   2.68   1.00    1.48  284.    7.9  285.9    2.0
 12 01 01   1 23  -21.4  0.214 -9.000 -9.000 -999.  237.     50.3  0.10   2.68   1.00    2.43  282.    7.9  285.4    2.0
 12 01 01   1 24  -30.1  0.300 -9.000 -9.000 -999.  394.     98.9  0.10   2.68   1.00    3.36  300.    7.9  284.2    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  322.    1.13   282.1   99.0  -99.00  -99.00

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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 8                                      ***        15:53:11
                                                                                                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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


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

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

ALL       1ST HIGHEST VALUE IS       0.00629 AT (  382862.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          2ND HIGHEST VALUE IS       0.00305 AT (  382822.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          3RD HIGHEST VALUE IS       0.00220 AT (  382800.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          4TH HIGHEST VALUE IS       0.00110 AT (  382742.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          5TH HIGHEST VALUE IS       0.00078 AT (  382699.00,  3744742.00,     7.00,     7.00,    2.00)  DC
          6TH HIGHEST VALUE IS       0.00073 AT (  382699.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          7TH HIGHEST VALUE IS       0.00052 AT (  382648.00,  3744778.00,     7.00,     7.00,    2.00)  DC
          8TH HIGHEST VALUE IS       0.00052 AT (  382648.00,  3744793.00,     7.00,     7.00,    2.00)  DC
          9TH HIGHEST VALUE IS       0.00052 AT (  382648.00,  3744763.00,     7.00,     7.00,    2.00)  DC
         10TH HIGHEST VALUE IS       0.00051 AT (  382648.00,  3744808.00,     7.00,     7.00,    2.00)  DC


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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 8                                      ***        15:53:11
                                                                                                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of         1017 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          747 Calm Hours Identified

 A Total of          270 Missing Hours Identified (  0.62 Percent)


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

    ********   WARNING MESSAGES   ********
 ME W186     178       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187     178       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

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

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

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

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO 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   168 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   9818605.0 ; Urban Roughness Length = 1.000 m

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

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

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 168 Source(s);   1 Source Group(s); and   25 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 168 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) =   10.00 ; 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.

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

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

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

Surface file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.SFC   Met Version: 16216
Profile file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   23129   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	-5.3	0.094	-9.000	-9.000	-999.	70.	14.3	0.10	2.68	1.00	1.13	322.	7.9	282.0	2.0
12	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	281.4	2.0
12	01	01	1	03	-2.5	0.068	-9.000	-9.000	-999.	43.	11.4	0.10	2.68	1.00	0.74	79.	7.9	280.9	2.0
12	01	01	1	04	-3.2	0.075	-9.000	-9.000	-999.	49.	11.7	0.10	2.68	1.00	0.86	137.	7.9	280.9	2.0
12	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	280.4	2.0
12	01	01	1	06	-5.2	0.093	-9.000	-9.000	-999.	68.	14.0	0.10	2.68	1.00	1.11	92.	7.9	279.9	2.0
12	01	01	1	07	-2.3	0.066	-9.000	-9.000	-999.	41.	11.5	0.10	2.68	1.00	0.69	67.	7.9	278.8	2.0
12	01	01	1	08	-1.7	0.060	-9.000	-9.000	-999.	36.	11.4	0.10	2.68	0.54	0.65	91.	7.9	279.9	2.0
12	01	01	1	09	36.2	-9.000	-9.000	-9.000	37.	-999.	-99999.0	0.10	2.68	0.31	0.00	0.	7.9	283.8	2.0
12	01	01	1	10	108.4	0.139	0.707	0.009	119.	124.	-2.3	0.10	2.68	0.24	0.92	319.	7.9	287.5	2.0
12	01	01	1	11	160.5	0.114	1.137	0.005	334.	93.	-1.0	0.10	2.68	0.21	0.62	23.	7.9	292.5	2.0
12	01	01	1	12	186.7	0.125	1.473	0.005	623.	105.	-1.0	0.10	2.68	0.20	0.69	18.	7.9	295.4	2.0
12	01	01	1	13	186.8	0.130	1.761	0.005	1065.	112.	-1.1	0.10	2.68	0.20	0.74	250.	7.9	297.5	2.0
12	01	01	1	14	161.7	0.150	1.834	0.005	1387.	139.	-1.9	0.10	2.68	0.21	0.96	347.	7.9	300.4	2.0
12	01	01	1	15	105.5	0.243	1.633	0.005	1499.	288.	-12.4	0.10	2.68	0.24	2.11	194.	7.9	295.9	2.0
12	01	01	1	16	32.4	0.211	1.109	0.005	1530.	233.	-26.3	0.10	2.68	0.33	1.98	186.	7.9	295.4	2.0
12	01	01	1	17	-20.5	0.250	-9.000	-9.000	-999.	300.	69.2	0.10	2.68	0.60	2.81	293.	7.9	291.4	2.0
12	01	01	1	18	-25.4	0.257	-9.000	-9.000	-999.	313.	72.8	0.10	2.68	1.00	2.90	301.	7.9	288.1	2.0
12	01	01	1	19	-21.0	0.211	-9.000	-9.000	-999.	233.	49.0	0.10	2.68	1.00	2.40	313.	7.9	286.4	2.0
12	01	01	1	20	-25.7	0.258	-9.000	-9.000	-999.	315.	73.3	0.10	2.68	1.00	2.91	302.	7.9	286.4	2.0
12	01	01	1	21	-22.5	0.225	-9.000	-9.000	-999.	256.	55.7	0.10	2.68	1.00	2.55	306.	7.9	285.4	2.0

```
 12 01 01   1 22   -9.3  0.126 -9.000 -9.000 -999.  111.     19.5  0.10   2.68   1.00    1.48  284.    7.9  285.9    2.0
 12 01 01   1 23  -21.4  0.214 -9.000 -9.000 -999.  237.     50.3  0.10   2.68   1.00    2.43  282.    7.9  285.4    2.0
 12 01 01   1 24  -30.1  0.300 -9.000 -9.000 -999.  394.     98.9  0.10   2.68   1.00    3.36  300.    7.9  284.2    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  322.    1.13   282.1   99.0  -99.00  -99.00

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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 9                                      ***        15:54:12
                                                                                                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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


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

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

ALL       1ST HIGHEST VALUE IS       0.00738 AT (  382800.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          2ND HIGHEST VALUE IS       0.00730 AT (  382822.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          3RD HIGHEST VALUE IS       0.00602 AT (  382862.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          4TH HIGHEST VALUE IS       0.00596 AT (  382742.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          5TH HIGHEST VALUE IS       0.00550 AT (  382699.00,  3744742.00,     7.00,     7.00,    2.00)  DC
          6TH HIGHEST VALUE IS       0.00490 AT (  382655.00,  3744983.00,     7.00,     7.00,    2.00)  DC
          7TH HIGHEST VALUE IS       0.00442 AT (  382648.00,  3744928.00,     7.00,     7.00,    2.00)  DC
          8TH HIGHEST VALUE IS       0.00441 AT (  382648.00,  3744913.00,     7.00,     7.00,    2.00)  DC
          9TH HIGHEST VALUE IS       0.00440 AT (  382648.00,  3744943.00,     7.00,     7.00,    2.00)  DC
         10TH HIGHEST VALUE IS       0.00437 AT (  382648.00,  3744898.00,     7.00,     7.00,    2.00)  DC


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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 9                                      ***        15:54:12
                                                                                                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of         1017 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          747 Calm Hours Identified

 A Total of          270 Missing Hours Identified (  0.62 Percent)


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

    ********   WARNING MESSAGES   ********
 ME W186     562       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187     562       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

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

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

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

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO 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   430 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   9818605.0 ; Urban Roughness Length = 1.000 m

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

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

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 430 Source(s);   1 Source Group(s); and   25 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 430 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) =   10.00 ; 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 =   3.8 MB of RAM.

**Input Runstream File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_10A_2012-2016_OTHER.DTA
**Output Print File: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_10A_2012-2016_OTHER.LST

**File for Summary of Results: F:\WD Passport\carson\project docs_3\construction hra\model\SCENARIO_10A_2012-2016_OTHER.SUM

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

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

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

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

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

1.54, 3.09, 5.14, 8.23, 10.80,

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

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

Surface file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.SFC Met Version: 16216
Profile file: F:\WD Passport\carson\project docs_3\construction hra\metdata\KLGB_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 23129 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	-5.3	0.094	-9.000	-9.000	-999.	70.	14.3	0.10	2.68	1.00	1.13	322.	7.9	282.0	2.0
12	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	281.4	2.0
12	01	01	1	03	-2.5	0.068	-9.000	-9.000	-999.	43.	11.4	0.10	2.68	1.00	0.74	79.	7.9	280.9	2.0
12	01	01	1	04	-3.2	0.075	-9.000	-9.000	-999.	49.	11.7	0.10	2.68	1.00	0.86	137.	7.9	280.9	2.0
12	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.10	2.68	1.00	0.00	0.	7.9	280.4	2.0
12	01	01	1	06	-5.2	0.093	-9.000	-9.000	-999.	68.	14.0	0.10	2.68	1.00	1.11	92.	7.9	279.9	2.0
12	01	01	1	07	-2.3	0.066	-9.000	-9.000	-999.	41.	11.5	0.10	2.68	1.00	0.69	67.	7.9	278.8	2.0
12	01	01	1	08	-1.7	0.060	-9.000	-9.000	-999.	36.	11.4	0.10	2.68	0.54	0.65	91.	7.9	279.9	2.0
12	01	01	1	09	36.2	-9.000	-9.000	-9.000	37.	-999.	-99999.0	0.10	2.68	0.31	0.00	0.	7.9	283.8	2.0
12	01	01	1	10	108.4	0.139	0.707	0.009	119.	124.	-2.3	0.10	2.68	0.24	0.92	319.	7.9	287.5	2.0
12	01	01	1	11	160.5	0.114	1.137	0.005	334.	93.	-1.0	0.10	2.68	0.21	0.62	23.	7.9	292.5	2.0
12	01	01	1	12	186.7	0.125	1.473	0.005	623.	105.	-1.0	0.10	2.68	0.20	0.69	18.	7.9	295.4	2.0
12	01	01	1	13	186.8	0.130	1.761	0.005	1065.	112.	-1.1	0.10	2.68	0.20	0.74	250.	7.9	297.5	2.0
12	01	01	1	14	161.7	0.150	1.834	0.005	1387.	139.	-1.9	0.10	2.68	0.21	0.96	347.	7.9	300.4	2.0
12	01	01	1	15	105.5	0.243	1.633	0.005	1499.	288.	-12.4	0.10	2.68	0.24	2.11	194.	7.9	295.9	2.0
12	01	01	1	16	32.4	0.211	1.109	0.005	1530.	233.	-26.3	0.10	2.68	0.33	1.98	186.	7.9	295.4	2.0
12	01	01	1	17	-20.5	0.250	-9.000	-9.000	-999.	300.	69.2	0.10	2.68	0.60	2.81	293.	7.9	291.4	2.0
12	01	01	1	18	-25.4	0.257	-9.000	-9.000	-999.	313.	72.8	0.10	2.68	1.00	2.90	301.	7.9	288.1	2.0
12	01	01	1	19	-21.0	0.211	-9.000	-9.000	-999.	233.	49.0	0.10	2.68	1.00	2.40	313.	7.9	286.4	2.0
12	01	01	1	20	-25.7	0.258	-9.000	-9.000	-999.	315.	73.3	0.10	2.68	1.00	2.91	302.	7.9	286.4	2.0
12	01	01	1	21	-22.5	0.225	-9.000	-9.000	-999.	256.	55.7	0.10	2.68	1.00	2.55	306.	7.9	285.4	2.0

```
 12 01 01   1 22   -9.3  0.126 -9.000 -9.000 -999.  111.     19.5  0.10   2.68   1.00    1.48  284.    7.9  285.9    2.0
 12 01 01   1 23  -21.4  0.214 -9.000 -9.000 -999.  237.     50.3  0.10   2.68   1.00    2.43  282.    7.9  285.4    2.0
 12 01 01   1 24  -30.1  0.300 -9.000 -9.000 -999.  394.     98.9  0.10   2.68   1.00    3.36  300.    7.9  284.2    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  322.    1.13   282.1   99.0  -99.00  -99.00

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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 10                                     ***        15:58:31
                                                                                                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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


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

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

ALL       1ST HIGHEST VALUE IS       0.00786 AT (  382800.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          2ND HIGHEST VALUE IS       0.00779 AT (  382822.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          3RD HIGHEST VALUE IS       0.00649 AT (  382862.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          4TH HIGHEST VALUE IS       0.00634 AT (  382742.00,  3744717.00,     7.00,     7.00,    2.00)  DC
          5TH HIGHEST VALUE IS       0.00584 AT (  382699.00,  3744742.00,     7.00,     7.00,    2.00)  DC
          6TH HIGHEST VALUE IS       0.00521 AT (  382655.00,  3744983.00,     7.00,     7.00,    2.00)  DC
          7TH HIGHEST VALUE IS       0.00470 AT (  382648.00,  3744928.00,     7.00,     7.00,    2.00)  DC
          8TH HIGHEST VALUE IS       0.00469 AT (  382648.00,  3744913.00,     7.00,     7.00,    2.00)  DC
          9TH HIGHEST VALUE IS       0.00468 AT (  382648.00,  3744943.00,     7.00,     7.00,    2.00)  DC
         10TH HIGHEST VALUE IS       0.00465 AT (  382648.00,  3744898.00,     7.00,     7.00,    2.00)  DC


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

 *** AERMOD - VERSION 21112  ***   *** Imperial Avalon                                                    ***        10/09/21
 *** AERMET - VERSION  16216 ***   *** Construction HRA / Scenario 10                                     ***        15:58:31
                                                                                                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  NODRYDPLT  NOWETDPLT  URBAN  ADJ_U*

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of         1017 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of          747 Calm Hours Identified

 A Total of          270 Missing Hours Identified (  0.62 Percent)


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

    ********   WARNING MESSAGES   ********
 ME W186    1348       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    1348       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

ATTACHMENT E

List of References

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2. California Air Pollution Control Officers Association (CAPCOA), 1987. *Toxic Air Pollutant Source Assessment Manual for California Air Pollution Control Districts and Applicants for Air Pollution Control District Permits*, prepared by Interagency Workshop Group, (Revised) December 1989.

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4. California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*.

5. California Air Resources Board, 2020. *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values*.

6. California Code of Regulations, Title 22, Section 12703.

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9. California Health and Safety Code, Section 44360.

10. Imperial Avalon, LLC, 2021. 21207 South Avalon Boulevard - Project Description.

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12. United States Environmental Protection Agency, Office of Emergency and Remedial Response, Toxics Integration Branch, December 1989. *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual, Part A, Interim Final*. EPA-540/1-89-002.

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20. United States Environmental Protection Agency, 2015. Handbook for Implementing the Supplemental Cancer Guidance at Waste and Cleanup Sites. Website: http://www.epa.gov/oswer/riskassessment/sghandbook/chemicals.htm.

21. United States Environmental Protection Agency, 2016. *User's Guide for the AMS/EPA Regulatory Model - AERMOD*. EPA-454/B-16-011.

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24. United States Environmental Protection Agency, National Center for Environmental Assessment, 2021. Integrated Risk Information System (IRIS). Diesel Engine Exhaust.

25. South Coast Air Quality Management District (SCAQMD), Meteorological Data Set for Long Beach Airport.

26. South Coast Air Quality Management District, 2006. *Final – Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds.*

27. South Coast Air Quality Management District, 2008. *Final Localized Significance Threshold Methodology.*

28. South Coast Air Quality Management District (SCAQMD), 2015. Staff Report – Proposed Amended Rules: 212–Standards for Approving Permits and Issuing Public Notice, 1401–New Source Review of Toxic Air Contaminants, 1401.1–Requirements for New and Relocated Facilities Near Schools, and 1402–Control of Toxic Air Contaminants from Existing Sources.

29. South Coast Air Quality Management District (SCAQMD), 2021. Air Quality Significance Thresholds.